Bronte Creek Meadows Phase 1

Preliminary Stormwater Management Report

Project Location:
Upper Middle Road & Burloak Drive
Burlington, ON

Prepared for:
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Engineers, Scientists, Surveyors.

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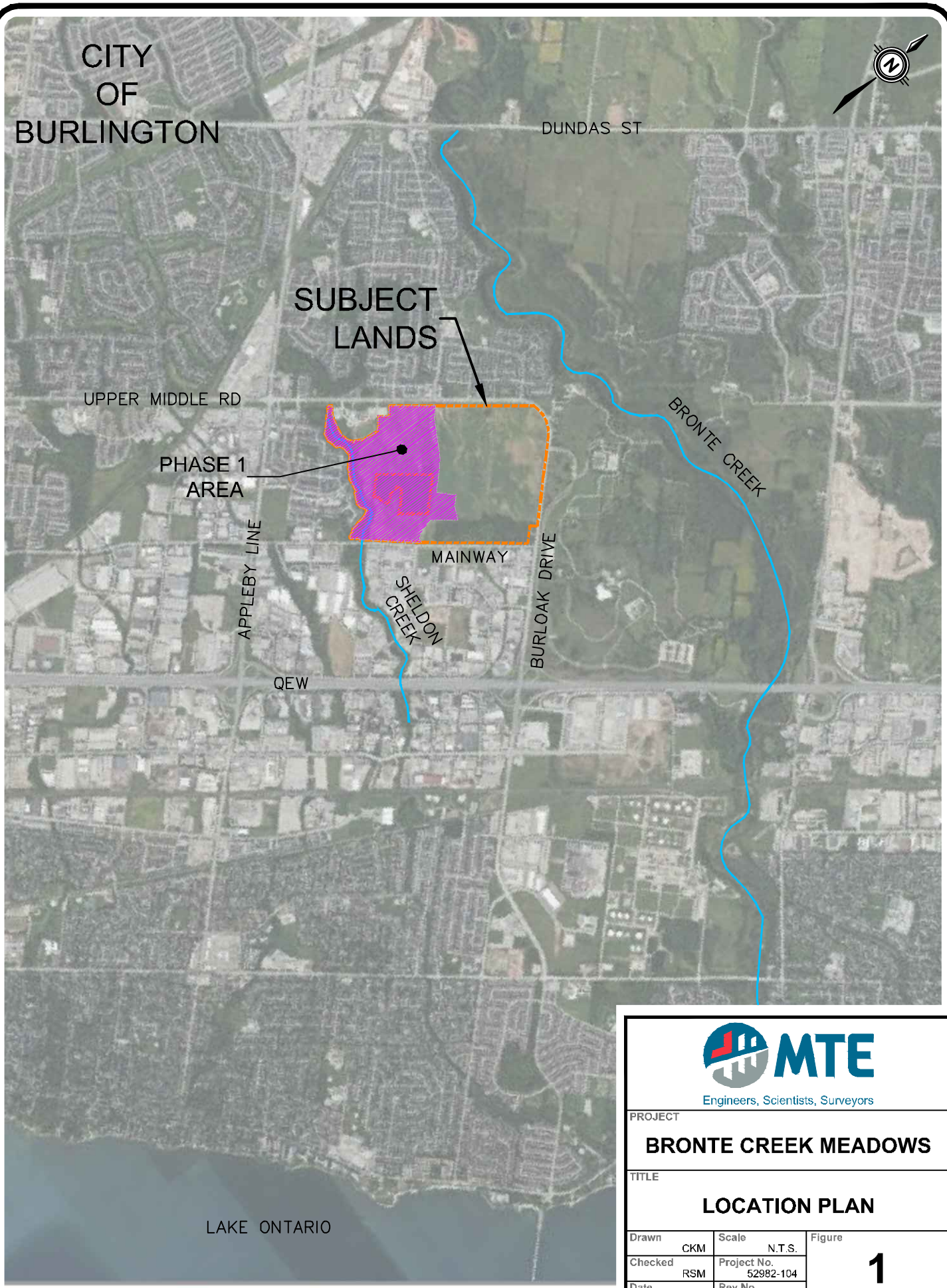
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1.0 INTRODUCTION

MTE Consultants Inc. (MTE) has been retained by Alinea Land Corporation to complete the Stormwater Management design in support of an application for Phase 1 Draft Plan of Subdivision Approval for their Upper Middle Road & Burloak Drive property in the City of Burlington. The property is also known as the Bronte Creek Meadows Phase 1 Subdivision and is referred to herein as the 'Subject Lands'.

The Subject Lands comprise an irregular shaped area of vacant lands of approximately 49.358 hectares (122.9 acres), and are part of a 123.1 ha land block owned by Alinea located south of the intersection of Upper Middle Road and Sutton Drive as shown in Figure 1.0 The Subject Lands are located in the south portion of the larger block which is bounded by Upper Middle Road (Halton Regional Road 38) to the northwest, Burloak Drive (Halton Regional Road 21) to the northeast, Mainway to the southeast, and existing development to the southwest, which includes Corpus Christi Catholic Secondary School and low rise residential development (Falconcrest Drive, Hobson Drive, Creek Way and the dead-ended Corporate Drive). The Subject Lands include agricultural fields, a woodlot measuring approximately 12ha which abuts Mainway and multiple watercourses. Sheldon Creek (Sheldon Creek West Branch; SCWB), which is within the Conservation Halton (CH) Regulation Limit, passes through the southern portion of the Subject Lands in a generally west to east direction. Two smaller watercourses, being a tributary to Sheldon Creek (Sheldon Creek East Branch; SCEB) and a tributary to Bronte Creek, also within the CH Regulation Limit, flow adjacent to and through the northeast portion of the larger Alinea block in a northwest to southeast direction. A few unregulated, poorly defined flow paths are also present on the Subject Lands. A woodlot known as Sheldon Creek Woodlot is located just north of Sheldon Creek, within a landlocked parcel owned by the City of Burlington measuring approximately 9.1ha, surrounded by the Subject Lands.

There is a 20m wide Hydro One corridor adjacent (and external) to the northwest limits of the Subject Lands between the Subject Lands and Upper Middle Road, on which a hydro pole line with approximately six overhead hydro cables runs parallel to Upper Middle Road along the entire frontage of the Subject Lands. Within the Subject Lands adjacent to the hydro corridor, there is an 18.28m wide Enbridge easement which contains twin 508mm high pressure underground oil pipelines, both of which are currently inactive.



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Plot Date: February 11, 2026 - 9:40 AM

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PROJECT
BRONTE CREEK MEADOWS

TITLE
LOCATION PLAN

Drawn: CKM	Scale: N.T.S.	Figure: 1
Checked: RSM	Project No.: 52982-104	
Date: 2025-10-02	Rev No.: 1	

2.0 EXISTING CONDITIONS AND BACKGROUND INFORMATION

2.1 Background Documentation

A review of available documents was carried out prior to the undertaking this preliminary SWM analysis for the Subject Lands. Previous studies include the following reports:

Ref. 1: *Secondary Stormwater Management Study East Sheldon and Bronte Tributary City of Burlington Draft Hydrology and Hydraulics*, Philips Planning + Engineering Limited, February 1989.

Ref. 2: *Sheldon Creek Watershed Master Plan*, Philips Planning + Engineering Limited, October 1993.

Ref. 3: *MTO Drainage Management Manual*, Ministry of Transportation, 1997.

Ref. 4: *Stormwater Management Pond Design Brief Mattamy East Orchard Lands (North of Upper Middle Road) Extended Detention/Quantity Pond, City of Burlington*, Cosburn Patterson Mather Limited, April 1999.

Ref. 5: *Stormwater Management Design Brief for Stormwater Ponds No. 2, 3 & 3A and Natural Channel Design, Orchard Community East, City of Burlington*, Marshall Macklin Monaghan, June 2001.

Ref. 6: *Stormwater Management Planning & Design Manual*, MOE, 2003.

Ref. 7: *Bronte Creek Hydrology and Stream Morphology Study*, Philips Planning + Engineering Limited, April 2003.

Ref. 8: *Low Impact Development Stormwater Management Planning and Design Guide Version 1.0*, Credit Vally Conservation Authority / Toronto Region Conservation Authority, 2010.

Ref. 9: *Stormwater Management Design Guidelines*, City of Burlington, May 2020.

Ref. 10: *Hydraulics Report East Burlington Creeks Flood Hazard Mapping Update*, WSP, June 02, 2023.

Ref. 11: *Hydrology Report East Burlington Creeks Flood Hazard Mapping Update*, WSP, June 02, 2023.

Ref. 12: *Bronte Creek Meadows Development Preliminary Geotechnical Investigation*, MTE Consultants Inc., February 9, 2026.

Ref. 13: *Bronte Meadows Development Fluvial Geomorphological Assessment and Flood Hazard Assessment*, Water's Edge, September 19, 2025.

Ref. 14: *Bronte Creek Meadows Massing Study 2.0*, NAK Design Strategies, March 26, 2024.

Ref. 15: *Bronte Creek Meadows Hydrogeological Assessment*, MTE Consultants Inc., October 01, 2025.

Ref. 16. *Bronte Meadows Figure A - Preliminary Natural Heritage Constraints*, Terrastory Environmental Consulting Inc., September 25, 2023.

Ref. 17: Bronte Creek Meadows Development Draft Preliminary Hydrogeological Assessment, MTE Consultants Inc., May 23, 2024.

Ref. 18: *Bronte Creek Meadows Scoped Subwatershed Study (DRAFT)*, MTE, February 2026.

2.2 Topographical Information

McKay, McKay & Peters Limited (MMP) completed a detailed topographic survey of the Subject Lands on July 28, 2023. The existing topography of the Subject Lands is shown on MMP drawings and MTE Drawing No. **52982-104 P-EST1.1.1, EST1.1.2**, enclosed.

Much of the Subject Land is relatively flat with elevations ranging from 141.9 to 129.5 m sloping generally from northwest to southeast at slopes generally on the order of 1-2%. Sheldon Creek, at the south end of the Subject Lands, is in a valley approximately 6-10m lower than the surrounding lands.

The Subject Lands are bounded in the northwest by Upper Middle Road and the existing Corpus Christi school and have approximately six drainage area splits along this boundary, each flowing southeasterly. One of the drainage areas receives inflow from the neighbouring subdivisions northwest of Upper Middle Road with their flows entering the Subject Lands via a large culvert beneath Upper Middle Road.

At the southeast limit of the Subject Lands, SCEB crosses Mainway via a large box culvert.

Within the open fields of the site, several smaller undefined flow paths convey runoff downstream towards Mainway. These flow paths are labelled on MTE Drawing No. **52982-104 P-EST1.1.1 and P-EST1.1.2** as defined by Terrastory, being SC-1, SC-2, SCT-1 through SCT-13, Sheldon Creek Side Channel, where SC, and SCT indicate that the flow paths discharge directly to either Sheldon Creek, or to Sheldon Creek Tributary.

2.3 Geotechnical Information

A Geotechnical investigation of the Subject Lands was completed by MTE Consultants Inc. and included advancement of 70 boreholes across the Subject Lands to depths from 2.3 to 7.5m below ground surface (mbgs). The resultant geotechnical report (Ref. 12) includes the following key information:

Topsoil & Fill

Topsoil was encountered across the Subject Lands in all boreholes, at thicknesses from 150mm to 360mm. In 22 of the boreholes, fill materials were encountered directly below the topsoil layer, at thicknesses ranging from 0.3 to 0.9m. It is recommended that this fill material be removed from any building footprint areas. It is further noted that this fill material can be used in landscaped areas.

Native Soils

Native site soils generally including glacial till deposits, with sand, silt and clay deposits in four boreholes.

Bedrock

Shale bedrock was encountered in all boreholes, at elevations ranging from 127.8m – 140.4m, at depths varying from 1.1m – 4.6mbgs. Two boreholes encountered limestone bedrock deposits at depths of 1.1 mbgs and 3.0 mbgs.

Groundwater

Groundwater was encountered in 16 of the 70 boreholes at the time of drilling, at depths from 1.5mbgs to 6.1mbgs. Ten (10) monitoring wells were installed.

Findings & Recommendations

Key findings and recommendations of the geotechnical investigation are as follow:

- Topsoil and fill should be stripped and stockpiled at the start of grading activities;
- The majority of the native soils as well as re-worked native soils above the groundwater table are suitable for reuse as engineered fill provided they are near the optimum moisture content for compaction purposes;
- The removed topsoil and fill are suitable for use in landscaped areas;
- The subgrade soils are susceptible to disturbance therefore construction traffic on the subgrade should be minimized;
- Structural fill used for raising grades beneath the proposed buildings should comprise of granular material such as OPSS Granular 'A' or 'B';
- Subgrade fill material beneath pavement areas and services should meet the requirements of OPSS Select Subgrade Material;
- Fill operations should be carried out in the dry summer months;
- Minor groundwater seepage should be expected where excavations extend into saturated seams. Minor to moderate groundwater seepage should be expected as excavations proceed through the shale bedrock. Sump pumps should be adequate to handle nuisance dewatering from the seepage. An MECP Permit to Take Water would be required if dewatering of more than 50,000 L/day is required;
- Shale should not be used as trench backfill;
- Pavement Design:

Pavement Component	Light Duty	Heavy Duty
Asphalt Hot Mix	90mm	110mm
OPSS 1010 Granular 'A' Base	150mm	150mm
OPSS 1010 Granular 'B' Subbase	350mm	450mm

- SWM facility sides above the high-water level should be sloped at 5:1 H:V to mitigate erosion;
- SWM facility berming should be cut at slopes of 3:1 to 5:1 H:V depending on the soils encountered.
- If the SWM facility will extend into the shale bedrock, a geosynthetic liner may be required due to the fractures in the bedrock allowing water permeability. Native cohesive glacial tills on site should be suitable for use as the pond liner.

2.4 Hydrogeological Information

A Hydrogeological assessment of the Subject Lands was completed by MTE Consultants Inc. The resultant preliminary hydrogeological assessment report (Ref. 17) includes the following key information:

Groundwater

- Groundwater elevation measurements taken from the on-site monitoring wells which were installed within the weathered shale bedrock ranged between approximately 126.0m to 140.3m.
- Groundwater elevations in piezometer locations within native fill deposits (aquitard) ranged between 124.2m and 138.9m.

Wetlands

- The primary source of water to the monitored wetland and surface water features are surface water runoff with limited to no groundwater contribution.
- The presence of low permeability soils underneath the wetland features may limit the downward percolation of groundwater into the shallow weathered bedrock.

Groundwater Flow

- Groundwater flow is interpreted southeast toward Lake Ontario, with a horizontal hydraulic gradient varying between approximately 0.009m/m to 0.024m/m.

Hydraulic Conductivity

- Infiltration rates of native till deposits are estimated to range from 8mm/h – 18mm/hr. A safety correction factor has not been applied and should be selected by the design engineer utilizing the hydraulic conductivity in their design.
- Hydrologic conductivity of the weathered shale bedrock is estimated to be on the order of 10^{-10} m/s to 10^{-6} m/s.

Infiltration Considerations

- Due to the low permeability of soils and high groundwater, Low Impact Development (LID) measures that rely on infiltration do not appear feasible within the Subject Lands.

Construction Dewatering

- Temporary construction dewatering may be needed during site servicing and construction of building foundations. An Environmental Activity and Sector Registry registration with MECP may be required for temporary construction dewatering.

Groundwater Quality

- The potential for effects on groundwater quality from infiltration in the proposed development is likely to be limited. Any potential changes to the shallow groundwater quality are not expected to influence the surface water quality in the onsite surface water and wetland features considering the limited groundwater discharge to these features.

Wells

- No municipal or private water supply wells are anticipated to be impacted by the proposed development.

2.5 Natural Heritage System

Several Natural Heritage System (NHS) features have been identified within Phase 1 by Terrastory Environmental Consulting Inc. In the context of stormwater management, these NHS features are limited to wetlands. Wetlands identified as SCW-1, SCW-2 and SCW-3 are within the Sheldon Creek Woodlot. A brief description of each wetland is provided in **Table 2.1**.

Table 2.1 – Wetlands

Identification	Location	Primary Water Source
SCW-1	Within Sheldon Creek Woodlot, south	Surface water fed from SCT-9
SCW-2	Within Sheldon Creek Woodlot, central	Surface water fed from SCW-1
SCW-3	Within Sheldon Creek Woodlot, north	Surface water fed from SCT-6 and SCT-6a

3.0 DEVELOPMENT CONCEPT

The Draft Plan for the Subject Lands (included in **Appendix A**) includes residential, mixed-use, school, employment, commercial, park, natural heritage system, woodlot compensation and open space lands as well as municipal road allowances.

4.0 STORMWATER MANAGEMENT

4.1 General

Due to the size of the Subject Lands and the complexity of the associated pre- and post-development drainage systems, a number of Points of Interest (POI) have been identified. Generally, a POI has been established at the upstream end of each important NHS feature, at key locations where runoff from external lands enter the Subject Lands, and at locations where pre- and/or post-development discharge from the Subject Lands is proposed. POI locations are indicated on relevant drawings and figures.

4.2 Criteria

SWM criteria for the development have been established to meet three goals: satisfy the general SWM criteria set out by the City for any development, respect existing infrastructure, and support NHS features within the Subject Lands.

4.2.1 General SWM Criteria

The general stormwater management design criteria for the Subject Lands are as follows:

Flood Control

Attenuate the post-development peak flow for the Regional (i.e., Hurricane Hazel) storm event to the pre-development (existing) peak flow.

Quantity Control

Attenuate the post-development peak flows for the 2 to 100-year storm events to the pre-development (existing) peak flows.

Erosion Control

Provide extended detention control to release the 4-hour, 25mm storm event over 48 hours.

Water Budgets

Maintain a post to pre-development surface water annual recharge to the regulated wetlands within the study area as per the Bronte Creek Meadows Scoped Subwatershed Study.

Water Quality Control

Provide Level 1 (Enhanced; 80% Average Annual Removal of Total Suspended Solids) water quality treatment.

4.2.2 Infrastructure-Based SWM Criteria

Under existing conditions, runoff from portions of the Subject Lands is discharged to existing storm sewers at various locations surrounding the site. It is important that the capacity of these sewers is not exceeded as a result of development of the Subject Lands. As such, an additional criterion has been set to control the post-development peak flow rate to the pre-development level at each existing inlet.

4.2.3 NHS Feature-Based SWM Criteria

In addition to the general criteria set out by the City, several additional criteria related to NHS features within the Subject Lands have been set. Generally, these include matching pre-development flow contributions to wetlands under post-development conditions. Specific information related to these locations and flow targets is included in subsequent sections.

4.3 Low Impact Development (LID) Considerations

The hydrogeological assessment for the Subject Lands (Ref. 15) estimates the coefficient of hydraulic conductivity of the bedrock to range from 10^{-10} to 10^{-6} m/s and estimates the infiltration rate of the silt till soils to be 8-18mm/hr, excluding a design safety factor. Applying a Safety Correction Factor of 2.5 to these rates yields Design Infiltration Rates of 3.2-7.2 mm/hr. The hydrogeological assessment report concludes that the use of LIDs does not seem feasible for the Subject Lands.

A screening of potential Low Impact Development (LID) measures has been completed for the project, in accordance with the Low Impact Development Stormwater Management Planning and Design Guide Version 1.0 (Ref. 6). A summary of the screening of each LID measure considered for the project is included in **Table 4.1**.

Table 4.1 – Summary of Low Impact Development Screening

LID Measure	Degree of Feasibility	To Be Implemented on Site? (Yes/No/ Maybe)	Discussion
Lot-level Rain Barrels	Feasible	Maybe	Lot-level rain barrels are feasible on site and would provide a measure of stormwater quantity control. Whether to implement or not is to be determined at the detailed design stage.
Lot-Level Cisterns	Feasible	No	Lot-level cisterns could provide SWM quantity control for the development. However, a more efficient result can be achieved with a communal SWM facility. Lot-level cisterns on non-low rise residential blocks is to be considered at the Site Plan design stage for each Block.
Green roof	Somewhat	Maybe	Green roof technology is not suited to sloped, low- and medium-density residential rooftops. Green rooves on non-low rise residential blocks is to be considered at the Site Plan Application stage for each Block.
Roof Downspout Disconnection	Feasible	Yes	Suitable, but will realize limited effectiveness due to short permeable flow path from downspout to roadway.
Soakaways, Infiltration Trenches or Chambers	Limited	Maybe	Soakaway pits may be proposed on Single Detached and Townhouse lots where depth to groundwater and depth to bedrock allows. To be explored at the detailed design stage.
Bioretention	Yes	No	No suitable location on plan.
Biofilter (filtration only Bioretention design)	Not Feasible	No	No suitable location on plan.
Vegetated Filter Strip	Yes	Maybe	To be explored at the detailed design stage.
Permeable Pavement	Yes	Maybe	May be considered at the Site Plan Application stage for non-low rise residential development blocks.
Increased Topsoil Depth	Feasible	Yes	Increased topsoil depth (up to 0.3m depth) can be utilized on all lots, increasing the soil water storage volume and infiltration potential.
Enhanced Grass Swale	Not feasible	No	No suitable location on plan.
Dry Swale	Not feasible	No	No suitable location on plan.
Perforated pipe system	Not feasible	No	Due to the high groundwater table and low infiltration potential of site soils, perforated storm sewers are generally not feasible in this development.

4.4 Methodology

In order to successfully complete the stormwater management design for this site, the following specific tasks were undertaken:

1. Determine the location of Points of Interest (POI) at which hydrologic information is important;
2. Prepare existing conditions hydrologic modeling to ascertain flow rates at each POI under the various design storms;
3. Determine the percent impervious of the site and catchment area parameters for inclusion in hydrologic modelling;

- Calculate post-development runoff hydrographs using a Visual Otthymo (VO) software model for each POI; and
- Design stormwater management measures to provide water quality and quantity controls as needed to meet the Stormwater management criteria.

4.5 Pre-Development Conditions

Under pre-development conditions, the Subject Lands were defined by 20 sub-catchments. One external sub-catchment area was also delineated adjacent to the Subject Lands. **Drawing EST1.1.1, EST1.1.2** provides an illustration of the sub-catchment areas, and **Table 4.2** provides a brief description of each sub-catchment area as well as the design parameters used in the hydrologic modeling.

Table 4.2 – Pre-Development Catchment Parameters

Sub-Catchment	Description	Area (ha.)	% Impervious	Pervious CN [1]
106	Ploughed field draining to Mainway at POI-13	18.31	0	85
107	Ploughed field draining to Sheldon Creek Woodland at POI-9	6.75	0	85
108	Ploughed field draining to Sheldon Creek valley at POI-2	0.67	0	85
109	Ploughed field draining to Sheldon Creek valley at POI-3	2.14	0	85
110	Ploughed field draining to Sheldon Creek Woodland at POI-6	2.67	0	85
111	Ploughed field draining to Sheldon Creek valley at POI-4	0.78	0	85
112	Ploughed field draining to Mainway at POI-11	4.15	0	85
113	Ploughed field draining to Sheldon Creek valley at POI-5	1.47	0	85
117	Ploughed Field draining to Mainway at POI-12	0.95	0	85
135	Woodlot draining to Sheldon Creek Tributary at POI-12	0.71	0	85
136	Woodlot draining to Sheldon Creek Tributary at POI-12	1.92	0	85
137	Ploughed Field drainage to Sheldon Creek Tributary at POI-10	1.24	0	85
138	Sheldon Creek Wetland 3 (SCW-3) draining to Sheldon Creek Tributary at POI-10	1.01	0	85

Sub-Catchment	Description	Area (ha.)	% Impervious	Pervious CN [1]
139	Sheldon Creek Wetland 3 (SCW-3) draining to Sheldon Creek Tributary at POI-12	2.16	0	85
140	Sheldon Creek Wetland 1 (SCW-1) draining to Sheldon Creek Tributary at POI-8	2.22	0	85
141	Woodlot draining to Sheldon Creek Tributary at POI-7	1.03	0	85
142	Sheldon Creek Wetland 2 (SCW-2) draining to Sheldon Creek Tributary	0.61	0	85
143	Woodlot draining to Sheldon Creek Tributary at POI-11	0.26	0	85
144	Woodlot draining to Sheldon Creek Tributary at POI-12	0.54	0	85
145	Woodlot draining to Sheldon Creek Tributary at POI-11	2.68	0	85
	Subtotal, Internal	52.27	0	
EXT-4	Hydro corridor draining into Catchment 106	1.05	0	85
	Subtotal, External	1.05	0	
Total	**77.81**	**53.32**		

[1] Pervious CN of 85 based on SCS Soil Class C, Row Crops. Pervious CN of 77 based on SCS Soil Class C, Woods. (Ref. 3, Design Chart 1.09).

In order to establish SWM quantity control targets at each important location in and around the Subject Lands, 17 Points of Interest (POI) have been identified. Each POI is described in **Table 4.3**, and is illustrated on **MTE Drawing P-EST1.1, EST1.1.2 – Preliminary Pre-Development Catchment Areas**.

Table 4.3 – Points of Interest

Point of Interest	Description	Sub-Watershed
POI-2	West limit of the Subject Lands at Sheldon Creek.	Sheldon Creek
POI-3	West limit of the Subject Lands at Sheldon Creek.	Sheldon Creek
POI-4	West limit of the Subject Lands at Sheldon Creek.	Sheldon Creek
POI-5	Downstream development limit of the Subject Lands at Mainway and Sheldon Creek.	Sheldon Creek
POI-6	West edge of Sheldon Creek Woodland, at upstream end of SCT-9. Flow from this point feeds SCW-1.	Sheldon Creek Tributary
POI-7	Downstream of Sheldon Creek Woodland, on SCT-1. This receives flow from a portion of SCW-1.	Sheldon Creek Tributary
POI-8	Upstream development limit of the Health Care Campus within the Subject Lands. This receives flow from a portion of SCW-1 and SCW-2.	Sheldon Creek Tributary
POI-9	North edge of Sheldon Creek Woodland, at downstream end of SCT-6 and SCT-6a. Flow from this point feeds SCW-3.	Sheldon Creek Tributary
POI-10	Upstream development limit of the Health Care Campus within the Subject Lands. This is the proposed downstream limit of SCW-3.	Sheldon Creek Tributary
POI-11	Downstream development limit of the Subject Lands at Mainway, ~70m east of John Lucas Drive, at existing CB which captures and	Sheldon Creek Tributary

Point of Interest	Description	Sub-Watershed
	conveys flow to Sheldon Creek Tributary via storm sewers along Mainway and John Lucas Drive.	
POI-12	West edge of Sheldon Creek Woodland, at upstream end of SCT-9. Flow from this point feeds SCW-1.	Sheldon Creek Tributary

City of Burlington 2020 design rainfall (Intensity-Duration-Frequency) parameters used in hydrologic modeling are listed in **Table 4.4**.

Table 4.4 – IDF Parameters

Storm Event	Rainfall Parameter		
	A	B	C
25mm Water Quality [1]	458.01	6	0.780
2-Year	681.52	6	0.780
5-Year	802.04	5	0.764
10-Year	918.28	5	0.763
25-Year	1065.95	5	0.762
50-Year	1172.34	5	0.761
100-Year	1281.34	5	0.761

[1] 25mm WQ parameter A derived by factoring (2-year "A" of 681.52) * (25mm desired rainfall depth) / (2 years rainfall depth of 37.2mm)

To be consistent with the hydrologic modeling completed as part of the recent Sheldon Creek hydrology study (Ref. 11), the SCS rainfall distribution and storm duration of 12 hours were used in all modeling except for the 25mm WQ event. In accordance with the recommendations of the SSWS (Ref. 18), the 25mm Water Quality event has used the Chicago distribution and a duration of 4-hours. The Regional storm used Antecedent Moisture Condition (AMC) III.

Using the design parameters listed in the above tables, pre-development peak flow rates were established at each POI using the Visual Otthymo (VO) hydrologic modeling software for the 25mm Water Quality as well as the 2-, 5-, 10-, 25-, 50- and 100-year design storm events. The resultant peak flow rates are shown in **Table 4.5**.

Table 4.5 – Pre-Development Peak Flow Data (m^3/s)

POI	Rainfall Event							
	25mm WQ	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	Regional
2	0.018	0.042	0.064	0.080	0.100	0.116	0.131	0.097
3	0.046	0.110	0.17	0.211	0.265	0.305	0.345	0.304
4	0.026	0.059	0.091	0.112	0.141	0.162	0.183	0.112
5	0.028	0.067	0.105	0.130	0.164	0.190	0.214	0.205

POI	Rainfall Event							
	25mm WQ	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	Regional
6	0.055	0.131	0.203	0.253	0.318	0.367	0.415	0.377
7	0.076	0.180	0.278	0.346	0.436	0.504	0.570	0.495
8	0.068	0.160	0.249	0.310	0.390	0.451	0.510	0.435
9	0.116	0.285	0.443	0.551	0.693	0.801	0.906	0.924
10	0.138	0.334	0.521	0.649	0.817	0.945	1.070	1.065
11	0.159	0.382	0.592	0.736	0.925	1.068	1.207	1.109
12	0.459	1.098	1.700	2.116	2.666	3.083	3.490	3.135

The flow rates listed in **Table 4.5** have been set as the maximum allowable post-development peak flows at each POI.

Pre-development hydrologic modeling output files, along with a pre-development hydrologic connectivity schematic, are included in **Appendix B**.

4.6 SWM Strategy

The SWM strategy for the Subject Lands includes discharging treated stormwater to various NHS features within and downstream of the development, including woodlots and wetlands. Runoff from the majority of the development lands is discharged through wet pond SWM facilities.

Specific SWM measures for the project include two wet pond SWM facilities, and lot-level infiltration measures.

SWMF1

SWMF1 is located east side of the Phase 1 lands and captures and treats runoff from the majority of the development lands. Due to grading constraints, it is not feasible to direct runoff from Employment Block 238 to the SWM facility.

The inlet to SWMF1 is located at Sutton Drive. SWMF1 outlets to the Sheldon Creek East Branch just upstream of the Mainway Woodland.

SWMF2

SWMF2 is located southeast of Sheldon Creek West Branch and captures and treats runoff from the Phase 1 lands south of the Sheldon Creek Woodlot.

The inlet to SWMF2 is located north of Mainway and its outlet discharges to the Sheldon Creek West Branch and existing storm sewer on Mainway.

Surface water recharge to wetlands SCW-1, SCW-2 and SCW-3 is provided using two ‘third pipe’ storm sewer networks designed to capture clean runoff from rooftops and convey it to these wetlands. The extent of each ‘third pipe’ network has been sized in order to closely match pre-development wetland surface water recharge volumes during relevant portions of the year as discussed in greater detail in subsequent subsections.

4.7 Post-Development Conditions

Under post-development conditions, the study area was delineated into 16 sub-catchments, including 15 within the Subject Lands and one external areas. **Table 4.6** provides a brief description of each sub-catchment as well as the design parameters used in the hydrologic modeling. **MTE Drawing P-SW1.1** (enclosed) provides an illustration of the sub-catchment areas.

Table 4.6 – Post-Development Sub-Catchment Parameters

Sub-Catchment	Description	Area (ha.)	% Impervious [4]	Pervious Flow Length (m) [4]	Impervious Flow Length (m) [4]	Pervious Slope (%) [4]	Impervious Slope (%) [4]	Pervious CN [1]
135	Woodlot draining to Sheldon Creek Tributary at POI-12	0.71	0					85
136	Woodlot draining to Sheldon Creek Tributary at POI-12	1.92	0					85
138	Sheldon Creek Wetland 3 (SCW-3) draining to Sheldon Creek Tributary at POI-10	1.01	0					85
139	Sheldon Creek Wetland 3 (SCW-3) draining to Sheldon Creek Tributary at POI-23	2.16	0					85
140	Sheldon Creek Wetland 1 (SCW-1) draining to Sheldon Creek Tributary at POI-8	2.22	0					85
141	Woodlot draining to Sheldon Creek Tributary at POI-7	1.03	0					85
142	Sheldon Creek Wetland 2 (SCW-2) draining to Sheldon Creek Tributary	0.61	0					85
143	Woodlot draining to Sheldon Creek Tributary at POI-11	0.26	0					85
144	Woodlot draining to Sheldon Creek Tributary at POI-12	0.54	0					85
305	Development Area discharging to Sheldon Creek Tributary via West SWM facility	17.55	82	30	30	2	1	86
306	SWMF1	2.99	50	15	15	20	1	86
307	Development Area with roof top discharge to SCW-3	3.63	82	30	30	2	1	86
308	Development Area with roof top discharge to SCW-1	1.62	73	30	30	2	1	86
309	Institutional Block with on-site SWM controls, discharging towards Sheldon Creek via Mainway	8.29	99	30	30	2	1	86
311	Sutton Drive Right-of-Way	1.19	99	30	30	2	1	86
	Subtotal, Internal	**45.73**	**64.36**					
EXT-4	Hydro corridor draining into Catchment 106	1.05	0					
	Subtotal, External	**1.05**	**0**					
Total		**46.78[5]**	**62.91**					

[1] Pervious CN of 85 based on SCS Soil Class C, Row Crops. Pervious CN of 77 based on SCS Soil Class C, Woods. (Ref. 3, Design Chart 1.09).

Sub-Catchment	Description	Area (ha.)	% Impervious [4]	Pervious Flow Length (m) [4]	Impervious Flow Length (m) [4]	Pervious Slope (%) [4]	Impervious Slope (%) [4]	Pervious CN [1]
[2] Ref. 4. [3] Ref. 11. [4] Data not used in VO modeling for catchments with impervious less than 20%. [5] Total Post-Development ≠ Total Pre-Development due to proposed phasing limits. The remaining area is a part of future phases.								

4.8 Stormwater Management Design

4.8.1 Stormwater Quality Control

Two Wet Pond SWM facilities are proposed to provide water quality and quantity control treatment for runoff from the Subject Lands. Wet pond SWM facilities offer the benefits of dilution and settling of sediment within the forebay and the wet pond components. During the detailed design stage, a planting scheme will be prepared that carefully selects plant species and their location in and around the basin to stabilize banks, mitigate temperature increases, deter waterfowl from nesting within the area, and provide aesthetic and safety benefits.

The proposed SWM facilities each include a sediment forebay and a main pool. The sediment forebay will accept minor storm event flows originating from the majority of the Subject Lands. Major storm flows are diverted around the sediment forebay to avoid resuspension of solids.

The sediment forebays will be located at the inlet points to the facilities. The sediment forebay in SWMF1 will have maximum and minimum depths of 1.7m and 0.85mm, respectively. The sediment forebay in SWMF2 will have maximum and minimum depths of 1.5m and 0.75m, respectively. The maximum design depth would be available immediately following construction and after sediment clean-out operations. The minimum design operating depth is that which occurs prior to the required clean-out operations. Maintenance of the top portion of the forebay at all points in the sediment accumulation / clean-out cycle minimizes the potential for scour and re-suspension of previously settled sediments. The wet pond portion of SWMF1 has been designed with a 1.2m and SWMF2 has been designed with a 1.0m deep permanent pool feature.

Since the majority of annual rainfall (90th percentile) occurs in storms less than or equal to a 25mm event, the majority of water borne sediment is also transported to the SWM facility in these less intense events. Therefore, the sediment forebays are designed targeting the smaller flows. Furthermore, since larger storm events will have greater peak flows, there is potential for resuspension of accumulated sediment. Thus, the smaller flows into the forebay should be separated from the larger flows which should enter the main pond directly. To achieve this objective, the overland (major) flow route bypasses the sediment forebay and enters the main pool directly, which will be design at detailed design stage.

Forebay design is based on particle settling and flow dispersion equations as presented in the MOE 2003 Stormwater Management Practices Planning and Design Manual. The methodology presented in that document suggests that the design flow for the forebay should be taken as the peak outflow from the facility. Sediment forebay design calculations are included in **Appendix C**.

The clean-out frequency for the proposed SWM facilities can be found in the forebay design calculations in **Appendix C**.

Based on the MOE's 2003 Stormwater Management Guidelines, an Enhanced Level of water quality protection is required. Quality control measures proposed will take the form of wet pond SWM facilities. **Table 4.7** outlines the proposed SWMF1 and SWMF2 SWM facility designs. **Appendix C** includes main pond draw down calculations.

Table 4.7 – SWM Facility Water Quality Control Details

General	Pond Characteristics	
	SWMF1	SWMF2
Wet Pond Stormwater Management Facility	Enhanced Quality Control	Enhanced Quality Control
Total Contributing Area	38.99 ha	22.31 ha
Imperviousness	66.30%	42.49%
Main Pool Bottom Elevation	129.20m	125.50m
Average Pond Side Slopes (below Top of Freeboard)	5:1 H:V	5:1 H:V
Storage		
Unitary Storage Volume Requirements as per SWMMP (MOE 2003)	216.4 m^3/ha	158.7 m^3/ha
Required Total Volume	8,436 m^3	3,541 m^3
Permanent Pool		
Required Permanent Pool Volume	6,876 m^3	2,649 m^3
Permanent Pool Volume Provided		
Forebay	3,820 m^3	834.4 m^3
Main Pool	27,748 m^3	2,369.6 m^3
Total	31,568 m^3	3,204 m^3
Permanent Pool Elevation	131.20 m	126.50m
Extended Detention		
Minimum Required Volume (based on 40 m^3/ha)	1,560 m^3	892 m^3
Extended Detention Volume Provided	3,060 m^3	2,983 m^3
Approximate Drawdown Time	46.7 hr	46.4 hr
Extended Detention Elevation	132.38 m	127.90 m
Peak Release Rate for Extended Detention (Quality)	0.050 m^3/s	0.086m^3/s
Sediment Forebays		
Required Forebay Length	52.48 m	24.64 m
Actual Forebay Length	60.0 m	25 m
Permanent Pool Elevation	131.20 m	126.50 m
Bottom Elevation	129.20 m	125.00 m
Cleanout Frequency (to 50% sediment accumulation depth)	15.4 years	17.8 years
Outlet Controls		
Orifice 1 (Extended Detention) Diameter	345mm	230mm
Orifice 1 Invert Elevation	131.20 m	126.50 m
Orifice 2 Diameter	150 mm	680 mm
Orifice 2 Invert Elevation	131.50 m	127.60 m

General	Pond Characteristics	
	SWMF1	SWMF2
Orifice 3 Diameter	400 mm	-
Orifice 3 Invert Elevation	131.20 m	-
Weir Crest Breadth	-	4.2 m
Weir Crest Elevation	-	129.20 m
Weir Side Slopes (below top of freeboard elevation)	3:1 H:V	3:1 H:V

4.8.2 Stormwater Quantity Control

Storm sewers throughout the Subject Lands have been designed to convey the minor (5-year) storm event to the downstream SWM facilities SWMF1 and SWMF2. Major flow greater than the capacity of the storm sewer system will be conveyed to SWM facilities via overland flow routes along proposed roadways. Due to grading constraints, runoff from Block 226 cannot be directed to the proposed SWMF1 facility. On-site SWMF2 is proposed within the block as discussed further below.

Key considerations for discharge from the proposed SWM facilities and a description of the controls included therein are provided in the following sections.

4.8.2.1 SWMF1

Pond SWMF1 is located west of the realigned tributary, just upstream of POI-19, POI-20 and POI-28. Flows to all three of these POIs confluence approximately 180m downstream at POI-23 just upstream of Mainway.

POI-28, at the upstream end of headwater drainage feature (HDF) SCT-13, discharges to wetland SCW-4. It is required that sufficient flow is provided to this location to maintain this wetland under post-development. However, because SCW-4 spills directly into SCEB, no negative impact to SCW-4 would be expected if the target flow rate is exceeded.

SWMF1 and its outlet structure have been designed to provide Enhanced water quality treatment, and to ensure that target discharge rates are provided to POI-28 and further downstream at POI-23 for all storm events including the Regional storm.

The outlet from SWMF1 includes a box outlet structure with a total of three (3) inlets and one outlet. Orifice 1 , Orifice 2 and a weir control flow from the main pool of the pond into the outlet box structure, Orifice 3 controls flow out of the outlet box structure to the downstream watercourse. Orifice 1 is 345mm diameter in size, set at an elevation of 131.20m and is designed to control the 25mm WQ storm event. Orifice 2 is 150mm diameter in size, set at an elevation of 131.50m and is designed to control the 2-year to 100-year design storm events. The crest of the box structure is set at the 100-year water surface elevation of 132.50m, and acts as a wide-crested weir, allowing uncontrolled flow under the Regional storm event to enter the outlet box structure. Orifice 3, located on the downstream side of the box structure, has a diameter of 400mm and an invert elevation of 131.20m, and is designed to control the Regional storm flow out of the box structure. An emergency overflow spillway is provided at the top of the pond berm away from the outlet structure, and has a weir crest elevation set at the Regional storm water surface elevation.The box outlet structure discharge pipe is designed to convey all design storm flows to the realigned Sheldon Creek East Tributary channel and POI-21. The configuration of the outlet structure is shown on **Drawing P-SW1.3 – Preliminary SWM Pond SWMF1**.

Stage-storage-discharge (SSD) relationships for SWMF1 are shown below in **Table 4.8**. Detailed SSD relations are provided in **Appendix C**.

Table 4.8 – Stage-Storage-Discharge Information – Pond SWMF1

Elevation (m)	Discharge (m^3/s)	Live Storage Volume (m^3)	Remarks
131.20	0	0	Permanent Pool Elevation; 345mm dia. Orifice Invert (2 to 100-yr storm events); 400mm dia. Orifice Invert (100-yr & Regional storm events)
131.50	0.093	5,687	Enhanced WQ Storage Volume; 150mm dia. orifice.
131.80	0.194	11,636	
132.10	0.258	17,854	Weir spilling into Outlet Box Structure
132.40	0.309	24,344	
132.70	0.400	31,110	
133.00	0.444	38,158	
133.30	0.483	45,492	
133.70	0.532	55,662	Top of Freeboard

4.8.2.2 SWMF2

Pond SWMF2 is located east of SCWB, just upstream of POI-15 and POI-11. It is important to mimic the pre-development flow rate to each of these POIs in the post-development case.

Discharge from wetlands SCW-1. SCW-2 and SCW-3 enter the Employment Block via HDF SCT-6b, SCT-11, SCT-10b. It is necessary to maintain the flow from the upstream wetlands through the Employment Block to avoid negative impacts to the wetlands, although it is understood that protection of the minor tributaries is not necessary or beneficial. As such, development of the Employment Block may include conveyance of the upstream flows via enclosed sewers or open channels.

SWMF2 and its outlet structure have been designed to provide Enhanced water quality treatment, and to ensure that target discharge rates are provided to POI-15 and POI-11. SWMF2 includes a multi-stage outlet to control the total peak flow out of the facility to within allowable release rates at POI-15 and POI-11.

The discharge rate from the pond to the outlet structure is controlled by a 230mm diameter orifice which provides water quality control and discharges to the existing 750mm diameter storm sewer on Mainway at POI-11. A second 680mm diameter orifice provides additional quantity control and discharges to Sheldon Creek west branch at POI-15. In addition to these orifices, a 4.2m wide weir discharges directly to POI-15. The configuration of the outlet structure is shown on **Drawing P-SW1.3-Preliminary SWM pond SWMF2.**

The stage-storage-discharge (SSD) relationship for SWMF2 is shown below in **Table 4.9.** Detailed SSD relations are provided in **Appendix C.**

Table 4.9 – Stage-Storage-Discharge Information – Pond SWMF2

Elevation (m)	Discharge (m^3/s)	Live Storage Volume (m^3)	Remarks
126.50	0	0	Permanent Pool Elevation; 230mm dia. Orifice Invert
127.12	0.081	2,732	Enhanced WQ Storage Volume
127.60	0.1151	5,247	680mm dia. Orifice Invert
128.00	0.4137	7,655	
128.50	0.9176	11,040	
129.20	1.324	16,479	Emergency Spill Weir Crest Elevation
129.30	1.568	17,322	
129.50	2.482	19,059	Top of Freeboard

4.8.3 Hydrologic Modeling

Hydrologic models were developed to provide quantitative estimates of flows across the study area under existing and proposed development conditions. The rainfall event simulation VO model was used to simulate response to the 25 mm Water Quality event using a 4-hour Chicago storm distribution 2-, 5-, 10-, 25-, 50- and 100-year return period design storm events using a 12 hour SCS rainfall distribution and City of Burlington intensity-duration-frequency parameters, and the Hurricane Hazel (last 12 hours; AMC Condition III) as was done in the pre-development modeling. Post-development VO modelling output is included in **Appendix "D"**, along with a hydrologic connectivity schematic.

Post-development hydrologic modeling results are summarized in **Table 4.10**.

Table 4.10 – Post-Development Peak Flow (m^3/s)

POI	Rainfall Event							
	25mm WQ	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	Regional
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0.019	0.044	0.067	0.084	0.105	0.121	0.137	0.096
5	0.086	0.164	0.395	0.564	0.786	0.909	1.011	3.023
6	0.172	0.197	0.222	0.239	0.261	0.278	0.294	0.238
7	0.127	0.196	0.265	0.317	0.392	0.449	0.505	0.441
8	0.123	0.186	0.248	0.290	0.347	0.396	0.445	0.381
9	0.382	0.393	0.404	0.411	0.421	0.429	0.436	0.415
10	0.405	0.447	0.489	0.518	0.556	0.585	0.613	0.560
11	0	0	0	0	0	0	0	0
12	0.030	0.071	0.110	0.137	0.172	0.199	0.225	0.183
Total Discharging Directly to Sheldon Creek West Branch	0.019	0.044	0.067	0.084	0.105	0.121	0.137	0.096
Total Discharging toward Sheldon Creek via all Routes	0.726	1.838	3.450	4.350	5.204	5.851	6.417	9.628

Peak flow exceedances are observed at POI-5 when comparing post-development (the proposed SWMF2 outlet location) to pre-development (uncontrolled overland drainage from ploughed lands) conditions for all design storm events. Per the SSWS (Ref. 18), post-development peak flow rates do not exceed pre-development peak flow rates at POI-16 and POI-17 located on Sheldon Creek West Branch further downstream in the ultimate condition. Thus, the exceedances at POI-5 are localized, acceptable and will not have any negative impacts on any existing downstream developments.

Peak flow exceedances are observed at POI-6 to POI-10 when comparing post-development to pre-development conditions during the 25mm water quality and 2-year design storm events. These exceedances are required in order to meet pre-development surface water recharge targets to SCW-1, SCW-2 and SCW-3. Given the exceedance is only observed during these minor storm events and not during the remaining storm events (5 to 100-year and Regional) as well as the SSWS (Ref. 18) similarly shows no detrimental impacts to existing downstream developments, these exceedances are considered localized and acceptable.

Data associated with the performance of the SWM facilities is included in **Tables 4.11 and 4.12**.

Table 4.11 – SWMF1 Performance Data

Storm Event	Max. Ponding Elevation (m)	Max. Detention Depth (m)	Max. Storage Volume Used (m^3)
25mm WQ	131.35	0.15	3,060
2 Year	131.55	0.35	6,730
5 Year	131.69	0.49	9,440
10 Year	131.78	0.58	11,210
25 Year	131.88	0.68	13,550
50 Year	131.98	0.78	15.360
100 Year	132.05	0.85	17,110
Regional	133.05	1.85	39,920

Table 4.12 – SWMF2 Performance Data

Storm Event	Max. Ponding Elevation (m)	Max. Detention Depth (m)	Max. Storage Volume Used (m^3)
25mm WQ	127.15	0.65	2,980
2 Year	127.72	1.22	5,980
5 Year	127.99	1.49	7,530
10 Year	128.15	1.65	8,600
25 Year	128.35	1.85	9,990
50 Year	128.50	2.00	11,030
100 Year	128.65	2.15	12,100
Regional	129.50	3.00	19,060

5.0 MONTHLY WATER BALANCE

Based on the Bronte Creek Meadows Scoped Subwatershed Study (MTE, February 2026), the recommended water balance criteria for the study area are as follows:

Wetland SCW-2 was observed to have standing water year around. While overwintering by frogs and turtles was not observed, the permanent pool does make overwintering possible. In order to maintain the year around pool in SCW-2, the water budget criterion for wetland SCW-2 is to maintain a post- to pre-development annual surface water recharge balance.

Other wetlands (SCW-1 and SCW-3) have not been observed to hold water through the winter months, and so it is more important to provide a balance in the months.

The water budget criterion for wetlands SCW-1 and SCW-3, then, is to provide a post- to pre-development surface water recharge balance during the summer months.

The report noted all wetlands were considered to be surface water fed with little to no inputs from groundwater aquifers. For wetlands with a pre-development catchment boundary that extended into the development lands (i.e. SCW-1 and SCW-3), water balance criteria will be met through the implementation of “third pipe” storm sewer networks that collect clean roof water and convey flows to the wetlands.

A continuous simulation was conducted with the developed model using a 31-year (1985 to 2015) meteorological data set recorded at the Royal Botanical Gardens in Burlington. This gauge is approximately 15km to the southwest of the Study Area and is considered to be representative of typical conditions for the Study Area.

Discretization of pre-development catchments from which runoff enters each of these wetlands is described in the Bronte Creek Meadows Scoped Subwatershed Study Report (dated September 2025), under separate cover. The pre-development annual surface water contribution to each of these wetlands, on a monthly basis, has been established using continuous hydrologic modeling and the 31-year data set.

5.1 Pre-Development Surface Water Budget

Pre-development surface water budget values for the Sheldon Creek Wetlands are listed in **Table 5.1**.

Table 5.1 – Pre-Development Surface Water Budget – Sheldon Creek Wetlands

Month	Wetland SCW-1	Wetland SCW-2	Wetland SCW-3	Wetland SCW-3 (Middle)
	Runoff (m^3)	Runoff (m^3)	Runoff (m^3)	Runoff (m^3)
January	1,679	1,888	2,664	3,8833,831
February	1,966	2,211	3,120	4,5474,486
March	2,434	2,738	3,863	5,6315,556
April	1,803	2,028	2,861	4,1704,115
May	1,146	1,289	1,818	2,6502,615
June	767	862	1,217	1,7741,750
July	1,574	1,771	2,498	3,6413,593
August	674	758	1,070	1,5601,539
September	748	841	1,186	1,7291,706
October	1,065	1,197	1,689	2,4622,430
November	1,303	1,466	2,068	3,0142,974
December	1,475	1,659	2,341	3,4123,367
Annual Total	16,634	18,709	26,397	38,47337,963

5.2 Post-Development Surface Water Budget

Maintenance of surface water contribution to the various wetlands downstream of development areas is important to ensure the long-term viability of the wetlands. Roof water collection systems and “third pipe” storm sewer networks will be implemented to collect, convey and discharge clean roof water to supplement surface water recharge deficits for wetlands SCW-1 and SCW-3. This mitigation strategy allows the proposed development to meet post- to pre-development water recharge balance requirements as defined above.

Post-development surface water budget values for the Sheldon Creek wetlands are listed in **Table 5.2**.

Table 5.2– Post-Development Surface Water Budget – Sheldon Creek Wetlands

Month	Wetland SCW-1	Wetland SCW-2	Wetland SCW-3	Wetland SCW-3 (Middle)
	Runoff (m^3)	Runoff (m^3)	Runoff (m^3)	Runoff (m^3)
January	1,574,1749	1,7841,959	1,9032,094	2,6452,836
February	1,81722,014	2,0632,259	2,1592,364	3,0283,233
March	2,2882,550	2,5922,854	2,7853,074	3,8604,149
April	1,8132,028	2,0382,252	2,3952,633	3,1923,430
May	1,2931,469	1,4361,612	1,9452,145	2,4512,651
June	9701,148	1,0661,244	1,6761,877	2,0142,216
July	1,7782,067	1,9752,263	2,7433,086	3,4383,782
August	8771,049	9611,133	1,5451,756	1,8432,053
September	9861,169	1,0791,262	1,7051,956	2,0362,286
October	1,2931,472	1,4261,605	2,0382,266	2,5082,736
November	1,4301,610	1,5931,773	2,0532,269	2,6292,845
December	1,4361,614	1,6211,798	1,8362,038	2,4872,690
Annual Total	17,55719,939	19,63322,014	24,78327,557	32,13134,905

Summaries of monthly pre- and post-development runoff volume comparisons to the wetlands are provided in **Tables 5.3 and 5.4**.

Table 5.3 – Pre- and Post-Development Surface Water Contribution – Wetlands SWC-1 and SCW-2

Month	Runoff to Wetland SCW-1 (m^3)			Runoff to Wetland SCW-2 (m^3)		
	Pre-Dev.	Post-Dev.	Net Surplus (Deficit)	Pre-Dev.	Post-Dev.	Net Surplus (Deficit)
January	1,679	1,749	70	1,888	1,959	70
February	1,966	2,014	48	2,211	2,259	48
March	2,434	2,550	116	2,738	2,854	116
April	1,803	2,028	224	2,028	2,252	224
May	1,146	1,469	323	1,289	1,612	323
June	767	1,148	381	862	1,244	381
July	1,574	2,067	492	1,771	2,263	492
August	674	1,049	374	758	1,133	374
September	748	1,169	421	841	1,262	421
October	1,065	1,472	408	1,197	1,605	408
November	1,303	1,610	307	1,466	1,773	307
December	1,475	1,614	138	1,659	1,798	138
Annual Total	16,634	19,939	3,304	18,709	22,014	3,304

Table 5.4 – Pre- and Post-Development Surface Water Contribution – Wetland SCW-3

Month	Runoff to Wetland SCW-3 (m^3)			Runoff to Wetland SCW-3 (Middle) (m^3)		
	Pre-Dev.	Post-Dev.	Net Surplus (Deficit)	Pre-Dev.	Post-Dev.	Net Surplus (Deficit)
January	2,664	2,094	(570)	3,831	2,836	(996)
February	3,120	2,364	(755)	4,486	3,233	(1,254)
March	3,863	3,074	(790)	5,556	4,149	(1,407)
April	2,861	2,633	(228)	4,115	3,430	(685)
May	1,818	2,145	326	2,615	2,651	36
June	1,217	1,877	660	1,750	2,216	466
July	2,498	3,086	588	3,593	3,782	186
August	1,070	1,756	685	1,539	2,053	514
September	1,186	1,956	769	1,706	2,286	580
October	1,689	2,266	576	2,430	2,736	306
November	2,068	2,269	201	2,974	2,845	(130)
December	2,341	2,038	(303)	3,367	2,690	(677)
Annual Total	26,397	27,557	1160	37,963	34,905	-3,058

Wetland SCW-2 is fed from SCW-1, therefore in order to provide the necessary annual surface water recharge balance at SCW-2, an annual recharge balance is also provided at SCW-1.

As demonstrated above, a post- to pre-development annual surface water recharge balance is achieved for wetlands SCW-1 and SCW-2, and a post- to pre-development surface water recharge balance during the summer months is achieved at wetlands SCW-3 and SCW-4.

6.0 Monitoring Program

6.1 During Development Monitoring Program

In accordance with the recommendations of the MESP a During Development Monitoring Program associated with the development has been designed for implementation by the developer and is divided into three components:

- Pre-Construction Monitoring
- During-Construction Monitoring
- Post-Construction Monitoring

The During-Development Monitoring Program includes monitoring programs for groundwater, surface water, wetland features and biological features.

- The groundwater monitoring program includes water level (continuous and manual measurements) and annual chemistry testing for general water quality including metals and nutrients.
- The surface water monitoring program includes continuous temperature monitoring and seasonal base and storm quality sampling samples including TSS, chlorides, nutrients, metals, and bacteria.
- The wetland monitoring program includes water level and seasonal quality samples including total phosphorus, nitrogen and chlorides.
- Biological monitoring has been completed by Colucent and includes wildlife monitoring and vegetation units. For additional details of the biological monitoring refer to Colucent's EIA.

Table 6.1 summarizes the various components of the monitoring program along with specific locations parameters frequency and status. **Figure 6.1** displays monitoring and sampling locations.

6.1.1 Pre-Construction Monitoring Program

The Pre-construction monitoring program was developed with reference to the MESP and subsequent input from relevant agencies (City, Region, CH). This portion of the monitoring is intended to establish detailed site background conditions and baseline data. This information will facilitate comparison with conditions during and following construction and allow an evaluation of the mitigation measures. The pre-construction monitoring program includes the following parameters:

- **Groundwater** – monitoring includes levels, general chemistry, metals and nutrients.
- **Surface Water Quality** – parameters include general chemistry, metals and nutrients.
- **Wetlands** – monitoring includes levels, general chemistry, metals and nutrients.
- **Ecology / Biology** – including preparation of an Ecological Rewilding, Adaptive Management and Monitoring Plan for lands to be conserved, restored, and protected in a post-development setting.
- **Streambank Stability** – baseline monitoring.

6.1.2 During-Construction Monitoring Program

The purpose of this stage of the monitoring is to continue with the pre-construction monitoring program in order to monitor the effectiveness of erosion and sediment control measures, and to confirm that mitigative measures are functioning properly. The proper function of SWM measures during construction is also critical. Additional monitoring (over and above the pre-construction program) will include:

- **SWM Facility Monitoring**

SWMF1

- Standard inspection of vegetation, structures, and general operation of hydraulic controls (observations of drawdown) within the stormwater management facility. These inspections are to occur seasonally and typically after a significant rainfall event.
- Regular inspection and maintenance of erosion and sediment control measures around and within the facility.
- Inspection of the regraded Sheldon Creek East Branch to ensure it is sufficiently distributing the peak flow from the facility.

SWMF2

- Standard inspection of vegetation, structures, and general operation of hydraulic controls (observations of drawdown) within the stormwater management facility. These inspections are to occur seasonally and typically after a significant rainfall event.
- Regular inspection and maintenance of erosion and sediment control measures around and within the facility.

A detailed SWM facility Operations & Maintenance Manual will be prepared for each SWM facility at the final design stage.

- **Erosion and Sediment Control** – per ESC plans.

This stage will begin at the commencement of area grading of the subdivision and will continue until 90% stabilization of the SWM Facility contributing catchment area is achieved (houses are constructed, lots are sodded). Annual reports are to be submitted, summarizing the data collected along with any conclusions, to the City, and Conservation Halton.

6.1.3 Post-Construction Monitoring Program

This period of monitoring will begin following 90% stabilization of the contributing catchment area to the SWM Facility. The purpose of this stage of the monitoring is to evaluate the performance of the constructed SWM Facilities under “ultimate” operating conditions. The post-construction monitoring period will extend for a 2-year period. Monitoring during this stage will include all components from the pre-construction and during-construction monitoring program.

Additional monitoring (over and above the during-construction program) will include:

- **Stormwater Management Facility** – winter by-pass valves would be typically operated between December 1 and March 31 (winter months), however the timing may differ year to year depending on weather and climatic conditions. Weather conditions should be monitored in late fall and early spring to determine valve operation.
- **Streambank Stability** – final condition monitoring.

It is recommended that following completion of the developer's portion of the post-construction monitoring program and assumption of the stormwater management facilities by the City, the City continues with a post-development inspection and maintenance program to ensure the long-term effectiveness of the proposed stormwater management facilities (including conveyance facilities and winter by-pass operation).

Table 6.1– Monitoring Program

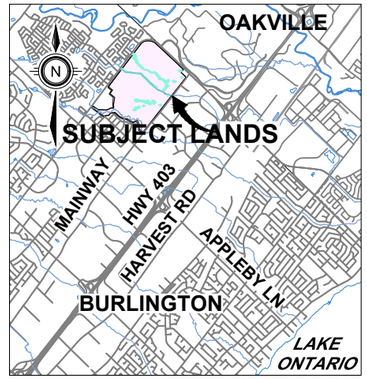
SURFACE AND GROUNDWATER MONITORING PROGRAM - BRONTE CREEK MEADOWS SUBDIVISION

Monitoring Component	Type of Monitoring	Development Phase	Sampling Frequency	Location(s)	Methodology / Timing
SWM Facilities	Water Quality	During/Post-Construction	Event-based (>15mm rain events)	Outlet of SWMF1, SWMF2, SWMF3	TSS samples captured seasonally following significant rainfall event (>15mm).
Wetlands	Water Levels	All	Continuous (1 hour interval)	SCW-1 (MP107-23, SG107-23), SCW-2 (MP103-23, SG103-23), SCW-3 (MP103-23, SG103-23), SCW-4 (MP102-23, SG102-23), Sheldon Creek (MP105-23, MP106-23, SG105-23, SG106-23), Sheldon Creek Tributary (MP101-23, SG101-23. SG102-23), Bronte Creek Tributary / BCW-1 (MP104-23, SG104-23)	Water levels will be continuously measured with recordings taken every 1 hour.
	Water Quality (General Chemistry)	All	Seasonally (spring, summer, fall)	SCW-1 (MP107-23, SG107-23), SCW-2 (MP103-23, SG103-23), SCW-3 (MP103-23, SG103-23)	Manual samples collected seasonally during dry weather (minimum 48 hours of no rainfall) and following significant rainfall events (>15mm in 24 hours). Wetland samples collected from both surface water and groundwater.
Surface Watercourses	Water Quality (TSS, Cl, TKN, NO_3, NO_2, TP, E.Coli, Fecal Coliform, Total and Dissolved Metals, DO)	All	Seasonally (spring, summer, fall)	Sheldon Creek - 105Q, 106Q Bronte Creek Tributary - 109Q, 111Q Sheldon Creek Tributary - 114Q, 110Q	Manual samples collected seasonally during dry weather (minimum 48 hours of no rainfall) and following significant rainfall events (>15mm in 24 hours).
	Water Levels and Temperature	All	Continuous (15 minute interval)	Sheldon Creek - SG105-23, SG106-23 Bronte Creek Tributary - 109P-A/B, 111P, 112P Sheldon Creek Tributary - 114P-A/B, 110P Burloak Dr Culvert - 113P	Water levels will be continuously measured with recordings taken every 1 hour (SG105-23, SG106-23) and 15 minute intervals at all other stations.
Groundwater	Water Levels	Pre-Construction	Continuous (1 hour interval)	MW101-23 - MW110-23	Water levels continuously measured with recordings taken every 1 hour.
		During/Post-Construction	Continuous (1 hour interval)	MW101-23 - MW110-24	Water levels continuously measured with recordings taken every 1 hour.
	Water Quality (General Chemistry)	Pre-Construction	Annually	MW101-23, MW102-23, MW103-23, MW104-24, MW105-23, MW106-23, MW107-23, MW108-23, MW109-23, MW110-23	Sampled on an annual basis and analyzed for general chemistry parameters (including major anions, cations, nutrients, metals, pH, conductivity, ammonia, chlorides, e-coli and total coliforms).
		During/Post-Construction	Annually	MW102-23, MW105-23, MW107-23	Same as Pre-Construction
Ecological	Vegetation	All		Refer to *Environmental Impact Assessment Report* prepared by Colucent Environmental	
	Wildlife Passage	During/Post-Construction		Refer to *Environmental Impact Assessment Report* prepared by Colucent Environmental	
	Buffer Integrity and Function	Post-Construction		Refer to *Environmental Impact Assessment Report* prepared by Colucent Environmental	

CAD: P:\P\52982\104\52982-104-SSWS-FIGURE 13.DWG

Plot Date: September 25, 2025 - 2:54 PM

QUINTE STREET
SUTTON DRIVE
BAKER DRIVE
DEER PLACE
UPPER MIDDLE ROAD
114 P-A
109 P-A
109 P-B
114 P-B
114 Q
109 Q
MW102-23
141.2m
MW101-23
141.5m
MP101-23
138.7m
101 P
SHELDON CREEK TRIBUTARY
BRONTE CREEK TRIBUTARY
MP105-23
133.2m
105 P
MW106-23
138.5m
105 Q
CREEK WAY
MW109-23
133.2m
MW103-23
136.0m
SHELDON CREEK WOODLAND
118 P
SCW-1
117 P
SCW-3
MP107-23
135.0m
107 P
108 P/Q
MP108-24
MP103-23
132.9m
116 P
MW107-23
133.1m
SCW-2
103 P
SHELDON CREEK
CORPORATE DRIVE
CREEK WAY
THORNBURN DRIVE
115 P
MW105-23
131.7m
BCW-1
MW104-23
132.9m
113 P
BURLOAK DRIVE
MP106-23
124.4m
MW110-23
130.9m
106 P
106 Q
MW108-23
130.7m
SCW-4
MP102-23
129.3m
102 P
MP104-23
131.1m
104 P
BCW-3
MAINWAY WOODLAND
BCW-2
110 Q
110 P
111 P
111 Q
112 P
MAINWAY
JOHN LUCAS DRIVE
SUTTON DRIVE
HEINE COURT
0 50 100 150 200 250m



KEY PLAN (nts)

LEGEND

- SUBJECT LANDS
- EXISTING BOREHOLE/ MONITORING WELL
- EXISTING MINI-PIEZOMETER (MP)
- EXISITING SURFACE WATER LOGGER (P)
- SURFACE WATER QUALITY STATION (Q)

138.4m ELEVATION (m AMSL)

- UNEVALUATED WETLAND / OTHER WETLAND
- WOODLAND DRIPLINE
- WATERCOURSE

REFERENCES

CITY OF BURLINGTON & OAKVILLE, ROAD NETWORK, OPEN DATA SET;
WETLANDS, WOODED AREAS, WATER FEATURES, PROVIDED BY TERRASTORY; AND
BING IMAGERY AS OF AUGUST 8 - 2023.

NOTES

THIS FIGURE IS SCHEMATIC ONLY AND TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE.

MTE
Engineers, Scientists, Surveyors

PROJECT
BRONTE CREEK MEADOWS SCOPED SUBWATERSHED STUDY

TITLE
MONITORING AND SAMPLING LOCATION PLAN

Drawn	Scale	Figure
MMF	1:5,000	13
Checked	Project No. 52982-104	
Date 2025-09-25	Rev No. 0	

7.0 EROSION AND SEDIMENT CONTROL MEASURES

Erosion & sediment control measures for the development are described in the Functional Servicing Report for the project, submitted herewith.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing analysis, it is concluded that:

i. The flood control target is met by controlling post-development peak flows to within pre-development levels through the implementation of two wet pond SWM facilities.

ii. The erosion control target is met through the proposed SWM facilities, which have drawdown times less than 48 hours.

iii. Due to shallow bedrock, shallow groundwater and impermeable native soils, the use of subsurface LID measures such as soakaway pits and bioretention swales is not feasible.

iv. Enhanced (80% TSS removal) water quality treatment is provided by the wet pond SWM facilities.

v. Post-development peak flow rates to existing storm inlets and sewers at various locations around the site are controlled to within pre-development levels by both wet pond SWM facilities.

vi. Post-development peak flow rates to existing natural heritage system features (i.e. wetlands) surrounding the site are controlled to pre-development levels using multi-stage outlets from the proposed SWM facilities.

vii. Surface water contributions to wetlands SCW-1, SCW-2, SCW-3 and SCW-4 are maintained and enhanced under post-development conditions.

Based on the above conclusions, it is recommended:

i. That the SWM measures described in this report be implemented to provide flood, erosion, water quality and quantity controls.

ii. That Draft Plan Approval of the subject lands be granted by the City of Burlington, in order that the project may proceed to the detailed design stage.

All of which is respectfully submitted,

MTE Consultants Inc.

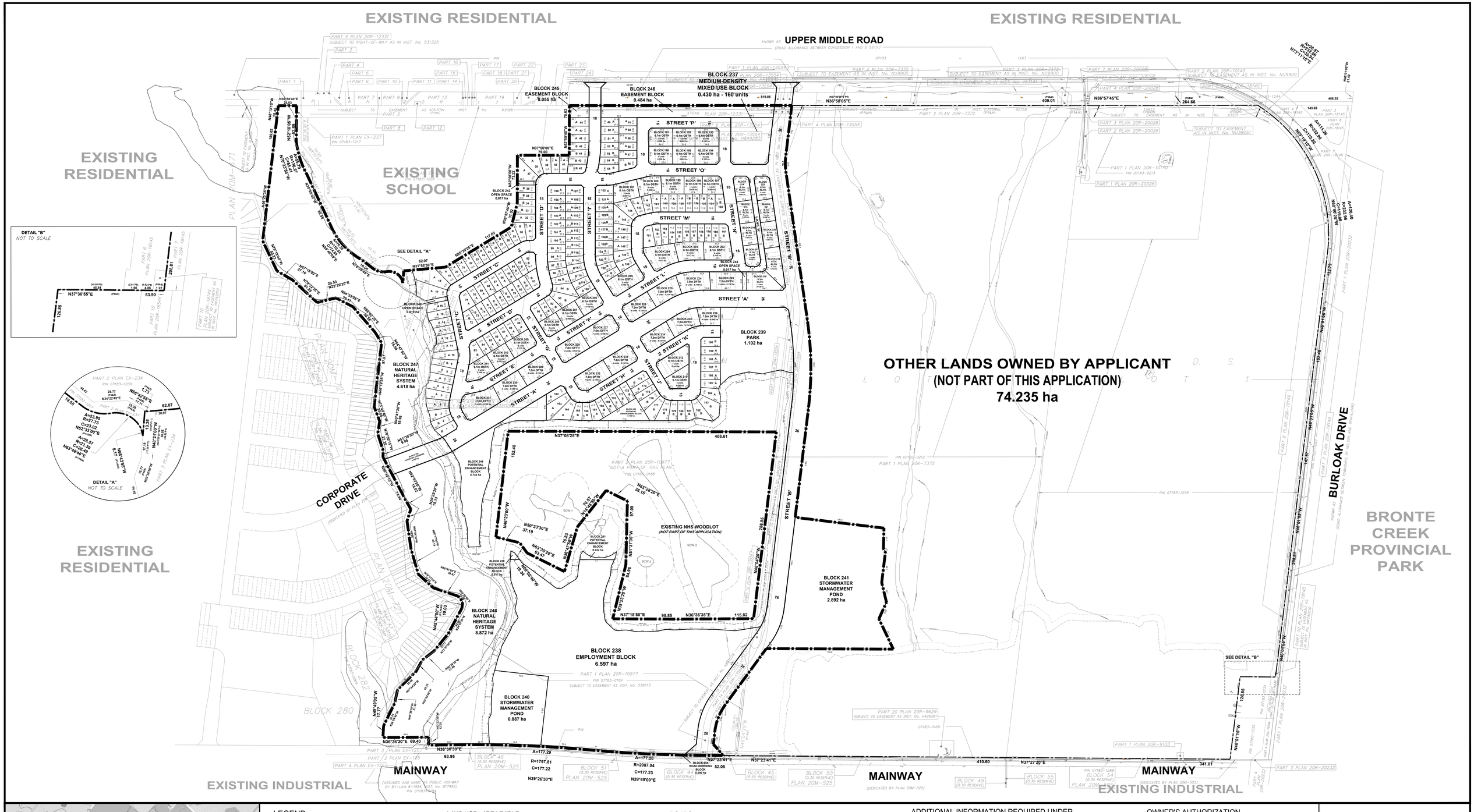


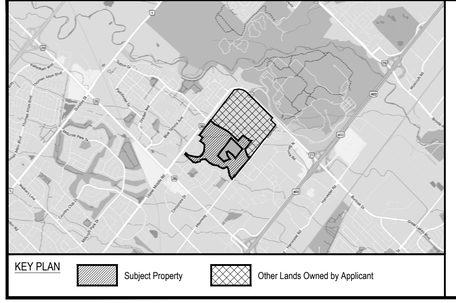
Kayam Ramsewak, C.E.T., P.Eng.
Director, Growth
905-639-2552
kramsewak@mte85.com

https://mte85.sharepoint.com/sites/52982-104/Shared Documents/03 - Reports/MTE/SWM/52982-104 SWM Report_ Phase 1.docx

Appendix A

Draft Plan of Subdivision Phase 1





KEY PLAN

Subject Property

Other Lands Owned by Applicant

LEGEND

Subject Property

NOTES

All dimensions are in metres.
All area measurements are computer generated.
All elevations refer to Geodetic Datum.

1 : 2500

LAND USE - AREA TABLE	23121 - 65dp			February 5, 2025
Low Density Residential	Lots	1-190	15%	7.286 ha±
On-Street Townhouses	Blocks	191-213	5%	2.409
Rear-Lane Townhouses	Blocks	214-222	2%	0.832
Double Frontage Townhouses	Blocks	223-236	4%	1.903
Med Density Mixed Use Block	Block	237	1%	0.430
Employment Block	Block	238	13%	6.597
Park	Block	239	2%	1.102
Stormwater Management Ponds	Blocks	240-241	8%	3.779
Open Space Blocks	Blocks	242-244	0%	0.053
Easement Blocks	Blocks	245-246	1%	0.539
Natural Heritage Blocks	Blocks	247-248	27%	13.490
Potential Enhancement Blocks	Blocks	249-252	2%	0.920
Potential Crossing Block	Block	253	1%	0.252
Road Widening	Block	254	0%	0.090
Roads			20%	9.676
Total			**100%**	**49.358 ha±**

ROADS			
26.0m Public R.O.W.	1.606	m	4.193
18.0m Public R.O.W.	2.944	m	5.344
7.5m Public Lane	165	m	0.139
Total	**4,715**	**m**	**9.676 ha**

ESTIMATED UNIT COUNT			
12.5m Single Family Detached	A	14%	85
11.0m Single Family Detached	B	18%	105
6.1m On-Street Townhouses		20%	119
6.1m Rear Lane Townhouses		7%	44
7.0m Double Frontage Townhouses		14%	84
Medium Density Units		27%	160
Total		**100%**	**597 units**

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

A, B, E, F, G, J, L - As Shown on Plan
C. Additional lands owned by the applicant as shown on the key plan.
D. Low Density Residential, On-Street Townhouses, Rear-Lane Townhouses, Dual Frontage Townhouses, Medium Density Mixed Use, School, Employment Block, Park, Stormwater Management Pond, Open Space, Easement, Natural Heritage Blocks, Woodlot Compensation Blocks, Potential Crossing, Road Widening, Roads
H. Piped water to be provided.
I. Clay loam soil.
K. Sanitary & storm sewers to be provided.

SURVEYOR'S CERTIFICATE

I certify that: the boundaries of the lands to be subdivided and their relationship to the adjacent lands are correctly shown.

ROY C. MAYO, O.L.S.
MACKAY, MACKAY AND PETERS LIMITED
Day Month Year

OWNER'S AUTHORIZATION

I/we, a. 5201 Mainway - Paletta Bros. Four Ltd.
b. 5164 Upper Middle Road - 2362302 Ontario Inc.
c. 5366 Upper Middle Road - Qualico Foods (1994) Inc.
d. 5900 Upper Middle Road - 2362302 Ontario Inc.
e. 5470 Upper Middle Road - Paletta International (1990) Inc.

being the registered owner(s) of the subject lands hereby authorize BOUSFIELD'S INC. to prepare and submit a draft plan of subdivision for approval.

a. Signature Day Month Year
b. Signature Day Month Year
c. Signature Day Month Year
d. Signature Day Month Year
e. Signature Day Month Year

DRAFT PLAN OF PROPOSED SUBDIVISION
LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.
(GEOGRAPHIC TOWNSHIP OF NELSON)
CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON

BOUSFIELDs INC.
3 Church Street, Suite 200
Toronto, Ontario M5E 1M2
P (416) 947-9744
F (416) 947-0781

1 : 2500	February 5, 2026	23121 - 65dp
Scale	Date	Drawing Number

Appendix B

Pre-Development Hydrology

Project: Bronte Creek Meadows
Project Number: 52982-104
Location: City of Burlington
Owner: The Alinea Group
Date: 2/13/2026
Designed by: DXP
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Pre

PRELIMINARY STORMWATER MANAGEMENT

Current- & Greenfield- Development Conditions Hydrologic Modeling Parameters

Catchment ID	Catchment Description	Hydrograph Method	Area (ha)	Perv. CN	Perv. Ia (mm)	Impervious (%) TIMP	Impervious (%) XIMP	Flow Length (m) Perv.	Flow Length (m) Imperv.	Manning's 'n' Perv.	Manning's 'n' Imperv.	Slope (%) Perv.	Slope (%) Imperv.	Time to Peak T_p (hrs)	Development Condition
DISCHARGING DIRECTLY TO SHELDON CREEK WEST BRANCH															
108	Ploughed field draining to Sheldon Creek valley at POI-2	NASHYD	0.67	85	4.48	0	0							0.21	Current
109	Ploughed field draining to Sheldon Creek valley at POI-3	NASHYD	2.14	85	4.48	0	0							0.28	Current
111	Ploughed field draining to Sheldon Creek valley at POI-4	NASHYD	0.78	85	4.48	0	0							0.15	Current
113	Ploughed field draining to Sheldon Creek valley at POI-5	NASHYD	1.47	85	4.48	0	0							0.33	Current
DISCHARGING TO SHELDON CREEK WEST BRANCH VIA MAINWAY STORM SEWERS															
EXT-4	Hydro corridor draining into Catchment 106	NASHYD	1.05	85	4.48	0	0							0.23	Current
106	Ploughed field draining to Mainway at POI-13	NASHYD	18.31	85	4.48	0	0							0.48	Current
107	Ploughed field draining to Sheldon Creek Woodland at POI-9	NASHYD	6.75	85	4.48	0	0							0.37	Current
110	Ploughed field draining to Sheldon Creek Woodland at POI-6	NASHYD	2.67	85	4.48	0	0							0.30	Current
112	Ploughed field draining to Mainway at POI-11	NASHYD	4.15	85	4.48	0	0							0.33	Current
115	Ploughed Field draining to Mainway at POI-13	NASHYD	1.24	85	4.48	0	0							0.24	Current
116	Ploughed Field draining to Mainway at POI-12	NASHYD	1.28	85	4.48	0	0							0.25	Current
117	Ploughed Field draining to Mainway at POI-12	NASHYD	0.95	85	4.48	0	0							0.23	Current
135	Woodlot draining to Sheldon Creek Tributary at POI-12	NASHYD	0.71	85	4.48	0	0							0.20	Current
136	Woodlot draining to Sheldon Creek Tributary at POI-12	NASHYD	1.92	85	4.48	0	0							0.23	Current
137	Ploughed Field drainign to Sheldon Creek Tributary at POI-12	NASHYD	1.24	85	4.48	0	0							0.28	Current
138	Sheldon Creek Wetland 3 (SCW-3) draining to Sheldon Creek Tributary at POI-12	NASHYD	1.01	85	4.48	0	0							0.22	Current
139	Sheldon Creek Wetland 3 (SCW-3) draining to Sheldon Creek Tributary at POI-12	NASHYD	2.16	85	4.48	0	0							0.26	Current
140	Sheldon Creek Wetland 1 (SCW-1) draining to Sheldon Creek Tributary at POI-8	NASHYD	2.22	85	4.48	0	0							0.27	Current
141	Woodlot draining to Sheldon Creek Tributary at POI-7	NASHYD	1.03	85	4.48	0	0							0.24	Current
142	Sheldon Creek Wetland 2 (SCW-2) draining to Sheldon Creek Tributary	NASHYD	0.61	85	4.48	0	0							0.18	Current
143	Woodlot draining to Sheldon Creek Tributary at POI-11	NASHYD	0.26	85	4.48	0	0							0.14	Current
144	Woodlot draining to Sheldon Creek Tributary at POI-12	NASHYD	0.54	85	4.48	0	0							0.20	Current
145	Woodlot draining to Sheldon Creek Tributary at POI-11	NASHYD	2.68	85	4.48	0	0							0.30	Current
DISCHARGING TO SHELDON CREEK EAST BRANCH															
EXT-3	Hydro corridor draining into Catchment 105	NASHYD	0.75	85	4.48	0	0							0.22	Current
EXT-22	Commercial lands draining to Sheldon Creek Tributary	STANDHYD	8.58	85	4.48	58	58	157.2	246.5	0.03	0.013	1.12	0.91		Current
104	Ploughed field draining to Mainway Woodland at POI-20	NASHYD	4.24	85	4.48	0	0							0.46	Current
105	Ploughed field draining to Sheldon Creek Tributary at POI-21	NASHYD	11.36	85	4.48	0	0							0.33	Current
121	Woodlot discharging to Mainway at POI-23	NASHYD	2.59	85	4.48	0	0							0.29	Current
123	Ploughed field draining to Sheldon Creek Tributary via SCW-4 at POI-19	NASHYD	0.39	85	4.48	0	0							0.18	Current
133	Sheldon Creek Wetland 4 (SCW-4) draining to Sheldon Creek Tributary at POI-22	NASHYD	0.45	85	4.48	0	0							0.19	Current
134	Woodlot draining to Sheldon Creek Tributary at POI-23	NASHYD	2.19	85	4.48	0	0							0.27	Current
DIVERGING BETWEEN SHELDON CREEK EAST BRANCH & BRONTE CREEK TRIBUTARY															
EXT-2	Hydro corridor draining into Catchment 129	NASHYD	0.93	85	4.48	0	0							0.23	Current/Greenfield
EXT-14	Orchard East Subdivision	STANDHYD	26.50	85	4.48	50	30	30	420	0.03	0.013	2	2		Current
EXT-17A	Upper Middle Road/Burloak Drive ROW	STANDHYD	3.93	85	4.48	99	99	0	115.5	0.03	0.013	1	0.4		Current
EXT-17B	Upper Middle Road/Burloak Drive ROW	STANDHYD	0.45	85	4.48	99	99	0	48.3	0.03	0.013	1	0.4		Current
129	Ploughed field draining to Bronte Creek Tributary at POI-27	NASHYD	14.62	85	4.48	0	0							0.45	Current/Greenfield
DISCHARGING TO BRONTE CREEK TRIBUTARY VIA MAINWAY															
EXT-11	East Orchard Subdivision (West)	NASHYD	19.89	85	4.48	0	0							0.49	Greenfield
EXT-12	East Orchard Subdivision (East)	NASHYD	8.32	85	4.48	0	0							0.39	Greenfield
EXT-13	Upper Middle Road/Burloak Drive ROW	STANDHYD	6.07	85	4.48	99	99	0	78.3	0.03	0.013	1	1.70		Greenfield
EXT-13A	Upper Middle Road/Burloak Drive ROW	STANDHYD	1.18	85	4.48	99	99	0	55.8	0.03	0.013	1	0.5		Greenfield
EXT-13B	Upper Middle Road/Burloak Drive ROW	STANDHYD	0.45	85	4.48	99	99	0	48.3	0.03	0.013	1	0.4		Greenfield
EXT-15	Ploughed field draining to Bronte Creek Tributary at POI-37	NASHYD	2.90	85	4.48	0	0							0.30	Greenfield
EXT-17	Upper Middle Road/Burlak Drive ROW	STANDHYD	5.85	85	4.48	99	99	0	78.3	0.03	0.013	1	1.70		Current
EXT-18	Developed commercial lands draining to Bronte Creek Tributary at POI-35	STANDHYD	2.90	85	4.48	80	80	124.91	166.18	0.03	0.013	0.6	0.7		Current
EXT-19	Grassed lot draining to Mainway at POI-31	NASHYD	0.69	85	4.48	0	0							0.18	Current/Greenfield
EXT-20	Mainway Roadway draining to Bronte Creek Tributary	STANDHYD	0.82	85	4.48	99	99	0	18.4	0.03	0.013	1	0.5		Current/Greenfield
EXT-21	Commercial lot draining to Bronte Creek Tributary	STANDHYD	1.21	85	4.48	79	79	63.9	157.2	0.03	0.013	0.5	0.6		Current/Greenfield
120	Woodlot discharging to Mainway at POI-31	NASHYD	3.87	85	4.48	0	0							0.33	Current/Greenfield
127	Woodlot draining to Mainway at POI-31	NASHYD	0.97	85	4.48	0	0							0.23	Current/Greenfield
130	Bronte Creek Wetland 1 (BCW-1) discharging to Mainway at POI-28	NASHYD	0.22	85	4.48	0	0							0.16	Current/Greenfield
131	Bronte Creek Wetland 2 (BCW-2) discharging to Mainway at POI-29	NASHYD	0.45	85	4.48	0	0							0.16	Current/Greenfield
DISCHARGING TO BRONTE CREEK TRIBUTARY VIA BURLOAK															
EXT-1	Hydro corridor draining into Catchment 124	NASHYD	0.33	85	4.48	0	0							0.18	Current/Greenfield
EXT-16	Park lands draining to Bronte Creek Tributary at POI-38	NASHYD	31.02	85	4.48	0	0							0.55	Current/Greenfield
101	Ploughed field draining toward Burloak Drive at POI-34	NASHYD	17.88	85	4.48	0	0							0.36	Current/Greenfield
124	Ploughed field draining to POI-33 at Burloak Drive then to POI-37	NASHYD	7.90	85	4.48	0	0							0.25	Current/Greenfield
125	Bronte Creek Wetland 3 (BCW-3) draining to POI-35	NASHYD	0.44	85	4.48	0	0							0.19	Current/Greenfield
126	Woodlot draining to Burloak Drive then to POI-36	NASHYD	0.19	85	4.48	0	0							0.15	Current/Greenfield
TOTAL AREA (CURRENT)			**207.56**												
TOTAL AREA (GREENFIELD)			**120.35**												

Notes

1. Pervious Initial Abstraction (Perv. Ia) = 0.1 x S , where S = (25400 / CN) - 254
2. Depression Storage over Impervious areas (DPSI) = 2.0 mm
3. Hydraulic Soil Classification = C, based on Sandy Silt / Silty Sand soils.
4. The following catchments in the table above are excluded form the Current Conditions modelling and total area: EXT-11, EXT-12, EXT-13, EXT-13A, EXT-13B, EXT-15
5. The following catchments in the table above are included in the Greenfield Conditions modelling and total area: EXT-1, EXT-2, EXT-11, EXT-12, EXT-13, EXT-13A, EXT13-B, EXT-15, EXT-16, EXT-19, EXT-20, EXT-21, 101, 120, 124, 125, 126, 127, 129,130, 131

Project: Bronte Creek Meadows
Project Number: 52982-104
Location: City of Burlington
Owner: The Alinea Group
Date: 2/13/2026
Designed by: DXP
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]TP-PH1

PRELIMINARY STORMWATER MANAGEMENT
Phase 1 Conditions

Time to Peak Calculations

Time to peak (T_p) values were derived from time of concentration (T_c) calculations based on the Airport Method equation:

$$T_c = \frac{3.26(1.1-C)L^{0.5}}{S_w^{0.33}}$$ (MTO Dainage Manual Design Chart 1.12)

T_c = Overland flow time of concentration (minutes)
L = Flow travel length
S = Basin slope (%)
C = Runoff coefficient

From this, **$T_p = 0.67\ T_c$**

The time to peak values used in the NASHYD command for the hydrologic modeling are shown below:

Catchment ID	Area (ha)	Length (m)	'C'	Slope (m/m)	T_c (min)	T_p (min)	T_p (hrs)	Development Condition	Notes
EXT-3	0.75	43	0.20	0.01	19.31	12.94	0.22	Current/Phase 1	1
EXT-4	1.05	51	0.20	0.01	21	14.07	0.23	Current/Phase 1	1
EXT-23	0.80	45	0.20	0.01	19.62	13.15	0.22	Phase 1	1
EXT-24	0.70	42	0.20	0.01	19	12.73	0.21	Phase 1	1
104	4.24	200	0.20	0.01	41.49	27.8	0.46	Current	2
104 (PH1)	4.24	200	0.20	0.01	41.49	27.8	0.46	Phase 1	2
105	11.36	100	0.20	0.01	29.34	19.66	0.33	Current	2
105 (PH1)	11.13	167	0.20	0.01	37.89	25.39	0.42	Phase 1	1
106	18.31	214	0.20	0.01	42.92	28.76	0.48	Current	1
106 (PH1)	4.12	101	0.20	0.01	29.56	19.81	0.33	Phase 1	1
107	6.75	130	0.20	0.01	33.44	22.4	0.37	Current	1
108	0.67	41	0.20	0.01	18.77	12.58	0.21	Current	1
109	2.14	73	0.20	0.01	25.09	16.81	0.28	Current	1
110	2.67	82	0.20	0.01	26.52	17.77	0.30	Current	1
111	0.78	20	0.20	0.01	13.12	8.79	0.15	Current	2
112	4.15	102	0.20	0.01	29.61	19.84	0.33	Current	1
113	1.47	100	0.20	0.01	29.34	19.66	0.33	Current	2
115	1.24	56	0.20	0.01	21.89	14.67	0.24	Current/Phase 1	1
116	1.28	57	0.20	0.01	22.07	14.79	0.25	Current/Phase 1	1
117	0.95	49	0.20	0.01	20.48	13.72	0.23	Current	1
121	2.59	80	0.20	0.01	26.32	17.63	0.29	Current/Phase 1	1
123	0.39	31	0.20	0.01	16.39	10.98	0.18	Current	1
133	0.45	34	0.20	0.01	16.99	11.38	0.19	Current/Phase 1	1
134	2.19	74	0.20	0.01	24.46	16.39	0.27	Current/Phase 1	1
135	0.71	42	0.20	0.01	17.46	11.7	0.20	Current/Phase 1	1
136	1.92	69	0.20	0.02	20.5	13.74	0.23	Current/Phase 1	1
137	1.24	56	0.20	0.01	24.63	16.5	0.28	Current	1
138	1.01	50	0.20	0.01	19.58	13.12	0.22	Current/Phase 1	1
139	2.16	73	0.20	0.01	23.68	15.87	0.26	Current/Phase 1	1
140	2.22	74	0.20	0.01	23.85	15.98	0.27	Current/Phase 1	1
141	1.03	51	0.20	0.01	21.64	14.5	0.24	Current/Phase 1	1
142	0.61	39	0.20	0.02	16.04	10.75	0.18	Current/Phase 1	1
143	0.26	25	0.20	0.02	12.69	8.5	0.14	Current/Phase 1	1
144	0.54	37	0.20	0.01	17.78	11.91	0.20	Current/Phase 1	1
145	2.68	82	0.20	0.01	26.54	17.78	0.30	Current	1
307A	0.29	27	0.20	0.01	15.22	10.2	0.17	Current/Phase 1	1
401	1.10	52	0.20	0.01	21.25	14.24	0.24	Current/Phase 1	1

Notes:
1 Length calculated as 0.5*(sqrt(A))
2 Length approximated due to irregular shape of catchment.
3 "(PH1)" denotes catchments apart of Phase 1 partitioned by Phase 1 limits

Bronte Creek Meadows
Visual OTTHYMO Hydrologic Modelling - Current Condition Schematic
Burlington, Ontario
Project Number: 32682-104
Date: February 20, 2026

NAMING CONVENTION

NAME FORMAT - VWWWXYYYZ

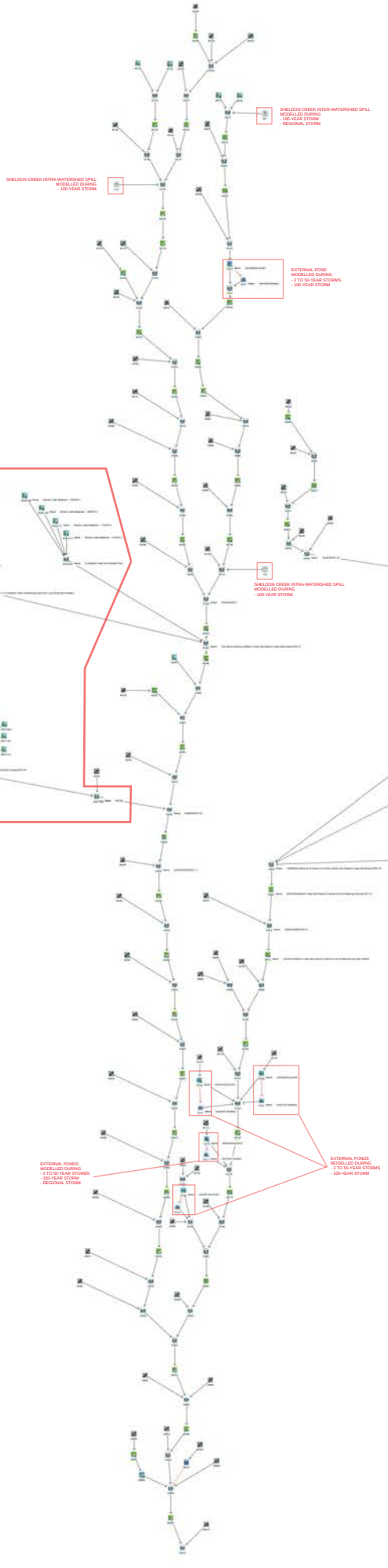
- "V" REPRESENTS GLYPH TYPE
  6 = ROUTE CHANNEL
  5 = ADDHYD & DIVERTHYD & ROUTEPIPE
  4 = CATCHMENTS
  3 = PONDS

- "WWW" REPRESENTS SUBCATCHMENT ID

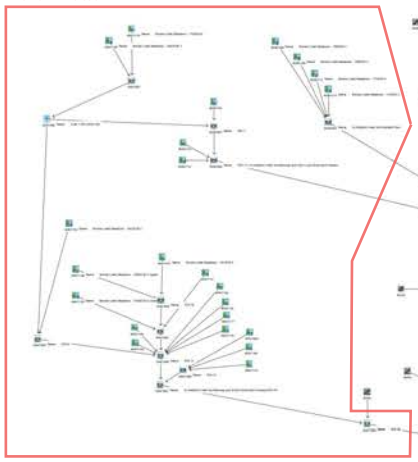
- "X" REPRESENTS SUB-SUBCATCHMENT AREA

- "YYY" REPRESENTS CATCHMENT ID
  100s - 300s = INTERNAL CATCHMENT IDs
  601s - 920s = EXTERNAL CATCHMENT IDs

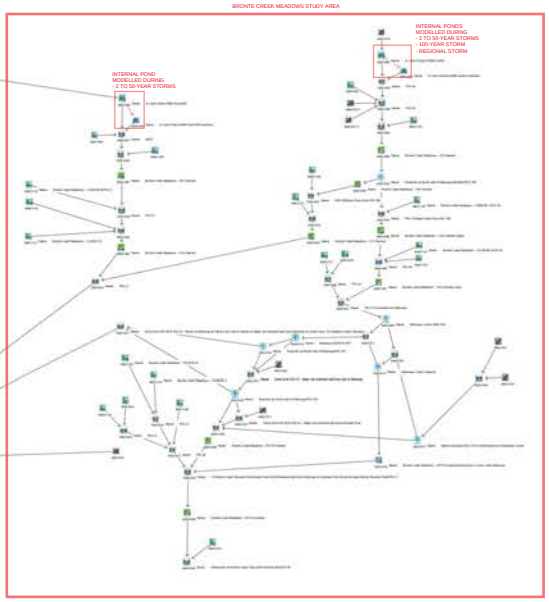
- "Z" REPRESENTS CATCHMENT ID SUBGROUP
  1 = A
  2 = B



BRONTE CREEK MEADOWS STUDY AREA



BRONTE CREEK MEADOWS STUDY AREA



Bronte Creek Meadows
Sheldon Creek & Bronte Creek Tributary VO Hydrologic Modeling Input Parameters - Current Condition
Burlington, Ontario
Project Number: 52982-104
Date: February 20, 2026
Design Storms: 2yr to 100yr & Regional

NASHYD Parameters - 2yr to 100yr & 25mm WQ Event

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	DT [min]	AREA [ha]	DWF [m^3/s]	CN	IA [mm]	N	TP [hr]	STORM INDEX	RAIN [mm/hr]
1	40010	SD0010				50010	5	43.088	0	79.50	8.41	3.0	0.47	1	0
2	40030	SD0030				50010	5	54.8839	0	79.37	8.34	3.0	0.46	1	0
3	40120	SD0120				50130	5	44.596	0	80.85	7.89	3.0	0.43	1	0
4	40130	SD0130				50130	5	63.82	0	82.70	7.55	3.0	0.50	1	0
5	40651126	Bronte Creek Meadows - 126				50651023	5	0.19	0	85	4.48	3.0	0.15	1	0
6	40651120	Bronte Creek Meadows - 120				50651006	5	3.87	0	85	4.48	3.0	0.33	1	0
7	40651131	Bronte Creek Meadows - 131/BCW-2/POI-29				50651006	5	0.45	0	85	4.48	3.0	0.16	1	0
8	40651101	Bronte Creek Meadows - 101/POI-34				50651022	5	17.88	0	85	4.48	3.0	0.36	1	0
9	40651105	Bronte Creek Meadows - 105				50651028	5	11.36	0	85	4.48	3.0	0.33	1	0
10	40651127	Bronte Creek Meadows - 127				50651008	5	0.97	0	85	4.48	3.0	0.23	1	0
11	40651121	Bronte Creek Meadows - 121				50651033	5	2.59	0	85	4.48	3.0	0.29	1	0
12	40651125	Bronte Creek Meadows - 125/BCW-3				50651022	5	0.44	0	85	4.48	3.0	0.19	1	0
13	40651002	Bronte Creek Meadows - EXT2				50651002	5	0.93	0	85	4.48	3.0	0.23	1	0
14	40651016	Bronte Creek Meadows - EXT16				50651026	5	31.02	0	85	4.48	3.0	0.55	1	0
15	40651001	Bronte Creek Meadows - EXT1				50651024	5	0.33	0	85	4.48	3.0	0.18	1	0
16	40651003	Bronte Creek Meadows - EXT3				50651027	5	0.75	0	85	4.48	3.0	0.22	1	0
17	40651130	Bronte Creek Meadows - 130/BCW-1/POI-28				50651005	5	0.22	0	85	4.48	3.0	0.16	1	0
18	40651104	Bronte Creek Meadows - 104				50651032	5	4.24	0	85	4.48	3.0	0.46	1	0
19	40651129	Bronte Creek Meadows - 129				50651003	5	14.62	0	85	4.48	3.0	0.45	1	0
20	40651124	Bronte Creek Meadows - 124				50651024	5	7.90	0	85	4.48	3.0	0.25	1	0
21	40651019	Bronte Creek Meadows - EXT19				50651008	5	0.69	0	85	4.48	3.0	0.18	1	0
22	40651134	Bronte Creek Meadows - 134				50651030	5	2.19	0	85	4.48	3.0	0.27	1	0
23	40651123	Bronte Creek Meadows - 123/POI-19				50651030	5	0.39	0	85	4.48	3.0	0.18	1	0
24	40651133	Bronte Creek Meadows - 133/SCW-4/POI-22				50651029	5	0.45	0	85	4.48	3.0	0.19	1	0
25	40361141	Bronte Creek Meadows - 141				50361001	5	1.03	0	85	4.48	3.0	0.24	1	0
26	40421136	Bronte Creek Meadows - 136				50421006	5	1.92	0	85	4.48	3.0	0.23	1	0
27	40421144	Bronte Creek Meadows - 144				50421006	5	0.54	0	85	4.48	3.0	0.20	1	0
28	40421115	Bronte Creek Meadows - 115				50421008	5	1.24	0	85	4.48	3.0	0.24	1	0
29	40421138	Bronte Creek Meadows - 138/SCW-3 Upper				50421004	5	1.01	0	85	4.48	3.0	0.22	1	0
30	40421139	Bronte Creek Meadows - 139/SCW-3 Lower	SCW-3			50421005	5	2.16	0	85	4.48	3.0	0.26	1	0
31	40361112	Bronte Creek Meadows - 112				50361002	5	4.15	0	85	4.48	3.0	0.33	1	0
32	40361143	Bronte Creek Meadows - 143				50361002	5	0.26	0	85	4.48	3.0	0.14	1	0
33	40421145	Bronte Creek Meadows - 145				50421006	5	2.68	0	85	4.48	3.0	0.30	1	0
34	40361111	Bronte Creek Meadows - 111/POI-4				50361003	5	0.78	0	85	4.48	3.0	0.15	1	0
35	40421137	Bronte Creek Meadows - 137				50421005	5	1.24	0	85	4.48	3.0	0.28	1	0
36	40361109	Bronte Creek Meadows - 109/POI-3				50361003	5	2.14	0	85	4.48	3.0	0.28	1	0
37	40421135	Bronte Creek Meadows - 135				50421006	5	0.71	0	85	4.48	3.0	0.20	1	0
38	40421142	Bronte Creek Meadows - 142/SCW-2				50421003	5	0.61	0	85	4.48	3.0	0.18	1	0
39	40421117	Bronte Creek Meadows - 117				50421006	5	0.95	0	85	4.48	3.0	0.23	1	0
40	40421140	Bronte Creek Meadows - 140/SCW-1				50421001	5	2.22	0	85	4.48	3.0	0.27	1	0
41	40421004	Bronte Creek Meadows - EXT4				50421008	5	1.05	0	85	4.48	3.0	0.23	1	0
42	40361108	Bronte Creek Meadows - 108/POI-2				50361003	5	0.67	0	85	4.48	3.0	0.21	1	0
43	40421106	Bronte Creek Meadows - 106				50421008	5	18.31	0	85	4.48	3.0	0.48	1	0
44	40421107	Bronte Creek Meadows - 107/POI-9				50421004	5	6.75	0	85	4.48	3.0	0.37	1	0
45	40421110	Bronte Creek Meadows - 110/POI-6				50421001	5	2.67	0	85	4.48	3.0	0.30	1	0
46	40421116	Bronte Creek Meadows - 116				50421006	5	1.28	0	85	4.48	3.0	0.25	1	0
47	40361113	Bronte Creek Meadows - 113/POI-5				50361003	5	1.47	0	85	4.48	3.0	0.33	1	0
48	40390	SD0390				50390	5	20.5503	0	85	8.47	3.0	0.2	1	0

NASHYD Parameters - Regional

NasHyd (48) | StandHyd (66) | AddHyd (95) | Junction (2) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (2) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	DT [min]	AREA [ha]	DWF [m^3/s]	CN	IA [mm]	N	TP [hr]	STORM INDEX	RAIN [mm/hr]
1	40010	SD0010			The CN is converted to CNIII on 2022-02-08	50010	5	43.088	0	90	8.41	3.0	0.47	1	0
2	40030	SD0030			The CN is converted to CNIII on 2022-02-08	50010	5	54.8839	0	90	8.34	3.0	0.46	1	0
3	40120	SD0120			The CN is converted to CNIII on 2022-02-08	50130	5	44.596	0	91	7.89	3.0	0.43	1	0
4	40130	SD0130			The CN is converted to CNIII on 2022-02-08	50130	5	63.82	0	92	7.55	3.0	0.50	1	0
5	403611113	Bronte Creek Meadows - 113/POI-5			The CN is converted to CNIII on 2025-07-07	50361003	5	1.47	0	93	4.48	3.0	0.33	1	0
6	403611111	Bronte Creek Meadows - 111/POI-4			The CN is converted to CNIII on 2025-07-07	50361003	5	0.78	0	93	4.48	3.0	0.15	1	0
7	403611109	Bronte Creek Meadows - 109/POI-3			The CN is converted to CNIII on 2025-07-07	50361003	5	2.14	0	93	4.48	3.0	0.28	1	0
8	40361108	Bronte Creek Meadows - 108/POI-2			The CN is converted to CNIII on 2025-07-07	50361003	5	0.67	0	93	4.48	3.0	0.21	1	0
9	40421110	Bronte Creek Meadows - 110/POI-6			The CN is converted to CNIII on 2025-07-07	50421001	5	2.67	0	93	4.48	3.0	0.30	1	0
10	40361112	Bronte Creek Meadows - 112			The CN is converted to CNIII on 2025-07-07	50361002	5	4.15	0	93	4.48	3.0	0.33	1	0
11	40421117	Bronte Creek Meadows - 117			The CN is converted to CNIII on 2025-07-07	50421006	5	0.95	0	93	4.48	3.0	0.23	1	0
12	40421116	Bronte Creek Meadows - 116			The CN is converted to CNIII on 2025-07-07	50421006	5	1.28	0	93	4.48	3.0	0.25	1	0
13	40421106	Bronte Creek Meadows - 106			The CN is converted to CNIII on 2025-07-07	50421008	5	18.31	0	93	4.48	3.0	0.48	1	0
14	40421004	Bronte Creek Meadows - EXT4			The CN is converted to CNIII on 2025-07-07	50421008	5	1.05	0	93	4.48	3.0	0.23	1	0
15	40421115	Bronte Creek Meadows - 115			The CN is converted to CNIII on 2025-07-07	50421008	5	1.24	0	93	4.48	3.0	0.24	1	0
16	40390	SD0390			The CN is converted to CNIII on 2022-02-08	50390	5	20.5503	0	90	8.47	3.0	0.2	1	0
17	40651019	Bronte Creek Meadows - EXT19			The CN is converted to CNIII on 2025-07-07	50651009	5	0.69	0	93	4.48	3.0	0.18	1	0
18	40651001	Bronte Creek Meadows - EXT1			The CN is converted to CNIII on 2025-07-07	50651026	5	0.33	0	93	4.48	3.0	0.18	1	0
19	40651105	Bronte Creek Meadows - 105			The CN is converted to CNIII on 2025-07-07	50651029	5	11.36	0	93	4.48	3.0	0.33	1	0
20	40651003	Bronte Creek Meadows - EXT3			The CN is converted to CNIII on 2025-07-07	50651028	5	0.75	0	93	4.48	3.0	0.22	1	0
21	40651123	Bronte Creek Meadows - 123/POI-19			The CN is converted to CNIII on 2025-07-07	50651031	5	0.39	0	93	4.48	3.0	0.18	1	0
22	40651130	Bronte Creek Meadows - 130/BCW-1/POI-28			The CN is converted to CNIII on 2025-07-07	50651005	5	0.22	0	93	4.48	3.0	0.16	1	0
23	40651126	Bronte Creek Meadows - 126			The CN is converted to CNIII on 2025-07-07	50651025	5	0.19	0	93	4.48	3.0	0.15	1	0
24	40651131	Bronte Creek Meadows - 131/BCW-2/POI-29			The CN is converted to CNIII on 2025-07-07	50651006	5	0.45	0	93	4.48	3.0	0.16	1	0
25	40651124	Bronte Creek Meadows - 124			The CN is converted to CNIII on 2025-07-07	50651026	5	7.90	0	93	4.48	3.0	0.25	1	0
26	40651127	Bronte Creek Meadows - 127			The CN is converted to CNIII on 2025-07-07	50651009	5	0.97	0	93	4.48	3.0	0.23	1	0
27	40651120	Bronte Creek Meadows - 120			The CN is converted to CNIII on 2025-07-07	50651006	5	3.87	0	93	4.48	3.0	0.33	1	0
28	40651125	Bronte Creek Meadows - 125/BCW-3			The CN is converted to CNIII on 2025-07-07	50651024	5	0.44	0	93	4.48	3.0	0.19	1	0
29	40651129	Bronte Creek Meadows - 129			The CN is converted to CNIII on 2025-07-07	50651003	5	14.62	0	93	4.48	3.0	0.45	1	0
30	40651002	Bronte Creek Meadows - EXT2			The CN is converted to CNIII on 2025-07-07	50651002	5	0.93	0	93	4.48	3.0	0.23	1	0
31	40651121	Bronte Creek Meadows - 121			The CN is converted to CNIII on 2025-07-07	50651034	5	2.59	0	93	4.48	3.0	0.29	1	0
32	40651104	Bronte Creek Meadows - 104			The CN is converted to CNIII on 2025-07-07	50651033	5	4.24	0	93	4.48	3.0	0.46	1	0
33	40651101	Bronte Creek Meadows - 101/POI-34			The CN is converted to CNIII on 2025-07-07	50651024	5	17.88	0	93	4.48	3.0	0.36	1	0
34	40651016	Bronte Creek Meadows - EXT16			The CN is converted to CNIII on 2025-07-07	50651036	5	31.02	0	93	4.48	3.0	0.55	1	0
35	40421107	Bronte Creek Meadows - 107/POI-9			The CN is converted to CNIII on 2025-07-07	50421004	5	6.75	0	93	4.48	3.0	0.37	1	0
36	40651133	Bronte Creek Meadows - 133/POI-22/SCW-4			The CN is converted to CNIII on 2025-07-07	50651030	5	0.45	0	93	4.48	3.0	0.19	1	0
37	40651134	Bronte Creek Meadows - 134			The CN is converted to CNIII on 2025-07-07	50651031	5	2.19	0	93	4.48	3.0	0.27	1	0
38	40421137	Bronte Creek Meadows - 137			The CN is converted to CNIII on 2025-07-07	50421005	5	1.24	0	93	4.48	3.0	0.28	1	0
39	40421135	Bronte Creek Meadows - 135			The CN is converted to CNIII on 2025-07-07	50421006	5	0.71	0	93	4.48	3.0	0.20	1	0
40	40421136	Bronte Creek Meadows - 136			The CN is converted to CNIII on 2025-07-07	50421006	5	1.92	0	93	4.48	3.0	0.23	1	0
41	40421138	Bronte Creek Meadows - 138/SCW-3 Upper			The CN is converted to CNIII on 2025-07-07	50421004	5	1.01	0	93	4.48	3.0	0.22	1	0
42	40421139	Bronte Creek Meadows - 139/SCW-3 Lower			The CN is converted to CNIII on 2025-07-07	50421005	5	2.16	0	93	4.48	3.0	0.26	1	0
43	40421142	Bronte Creek Meadows - 142/SCW-2			The CN is converted to CNIII on 2025-07-07	50421003	5	0.61	0	93	4.48	3.0	0.18	1	0
44	40361141	Bronte Creek Meadows - 141			The CN is converted to CNIII on 2025-07-07	50361001	5	1.03	0	93	4.48	3.0	0.24	1	0
45	40421140	Bronte Creek Meadows - 140/SCW-1			The CN is converted to CNIII on 2025-07-07	50421001	5	2.22	0	93	4.48	3.0	0.27	1	0
46	40421144	Bronte Creek Meadows - 144			The CN is converted to CNIII on 2025-07-07	50421006	5	0.54	0	93	4.48	3.0	0.20	1	0
47	40421145	Bronte Creek Meadows - 145			The CN is converted to CNIII on 2025-07-07	50421006	5	2.68	0	93	4.48	3.0	0.30	1	0
48	40361143	Bronte Creek Meadows - 143			The CN is converted to CNIII on 2025-07-07	50361002	5	0.26	0	93	4.48	3.0	0.14	1	0

STANHYD Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	DT [min]	AREA [ha]	TIMP	XIMP	DWF [m³/s]	LOSS	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI Type	LGI [m]	MNI	SCI [hr]	STORM INDEX	RAIN [mm/hr]
1	40020	SD0020	Future			50020	5	51.3181	0.66	0.56	0	Modified SCS Curve Method	1.3	50	0.29	0.0	2	1.3	Based on A = 1.5 * L^2	584.91	0.015	0.0	1	0
2	40040	SD0040	Future			50220	5	70.683	0.74	0.60	0	Modified SCS Curve Method	1.2	52	0.28	0.0	2	1.2	Based on A = 1.5 * L^2	686.45	0.015	0.0	1	0
3	40050	SD0050	Future			50040	5	52.2782	0.63	0.49	0	Modified SCS Curve Method	3.3	68	0.27	0.0	2	3.3	Based on A = 1.5 * L^2	590.36	0.015	0.0	1	0
4	40060	SD0060				50070	5	2.8386	0.3312	0.2627	0	Modified SCS Curve Method	2.6	98	0.32	0.0	2	2.6	Based on A = 1.5 * L^2	137.56	0.015	0.0	1	0
5	40080	SD0080	Future			50080	5	39.8489	0.66	0.54	0	Modified SCS Curve Method	1.4	72	0.27	0.0	2	1.4	Based on A = 1.5 * L^2	515.42	0.015	0.0	1	0
6	40090	SD0090				50090	5	4.4473	0.2223	0.1377	0	Modified SCS Curve Method	2.4	99	0.37	0.0	2	2.4	Based on A = 1.5 * L^2	172.19	0.015	0.0	1	0
7	40100	SD0100				50110	5	26.8961	0.4631	0.4242	0	Modified SCS Curve Method	1.4	125	0.28	0.0	2	1.4	Based on A = 1.5 * L^2	423.45	0.015	0.0	1	0
8	40140	SD0140	Future			50180	5	65.7606	0.71	0.61	0	Modified SCS Curve Method	1.3	66	0.29	0.0	2	1.3	Based on A = 1.5 * L^2	662.12	0.015	0.0	1	0
9	40180	SD0180	Future			50200	5	13.8862	0.76	0.73	0	Modified SCS Curve Method	1	66	0.31	0.0	2	1	Based on A = 1.5 * L^2	304.26	0.015	0.0	1	0
10	40190	SD0190				60190	5	13.7828	0.4161	0.3864	0	Modified SCS Curve Method	2.4	131	0.35	0.0	2	2.4	Based on A = 1.5 * L^2	303.13	0.015	0.0	1	0
11	40200	SD0200				50200	5	22.9419	0.759	0.7475	0	Modified SCS Curve Method	3	150	0.29	0.0	2	3	Based on A = 1.5 * L^2	391.08	0.015	0.0	1	0
12	40210	SD0210	No DuHyd defined / Because pond data is not available			50210	5	6.0729	0.8251	0.8177	0	Modified SCS Curve Method	0.9	118	0.29	0.0	2	0.9	Based on A = 1.5 * L^2	201.21	0.015	0.0	1	0
13	40220	SD0220				50120	5	11.3154	0.7877	0.7776	0	Modified SCS Curve Method	0.6	79	0.29	0.0	2	0.6	Based on A = 1.5 * L^2	274.66	0.015	0.0	1	0
14	40150	SD0150				50160	5	5.3685	0.5784	0.5213	0	Modified SCS Curve Method	2.3	45	0.29	0.0	2	2.3	Based on A = 1.5 * L^2	189.18	0.015	0.0	1	0
15	40240	SD0240				50250	5	10.2847	0.8545	0.8488	0	Modified SCS Curve Method	3.4	70	0.27	0.0	2	3.4	Based on A = 1.5 * L^2	261.85	0.015	0.0	1	0
16	40250	SD0250				60240	5	13.3593	0.6444	0.6289	0	Modified SCS Curve Method	2	70	0.32	0.0	2	2	Based on A = 1.5 * L^2	298.43	0.015	0.0	1	0
17	40260	SD0260	Future			50260	5	28.4473	0.56	0.43	0	Modified SCS Curve Method	1.3	46	0.3	0.0	2	1.3	Based on A = 1.5 * L^2	435.49	0.015	0.0	1	0
18	40270	SD0270				50270	5	9.8315	0.3177	0.2201	0	Modified SCS Curve Method	1.1	73	0.33	0.0	2	1.1	Based on A = 1.5 * L^2	256.01	0.015	0.0	1	0
19	40280	SD0280				50280	5	31.3045	0.644	0.5166	0	Modified SCS Curve Method	1.1	53	0.31	0.0	2	1.1	Based on A = 1.5 * L^2	456.83	0.015	0.0	1	0
20	40300	SD0300				50300	5	11.5252	0.5826	0.4496	0	Modified SCS Curve Method	1.6	63	0.34	0.0	2	1.6	Based on A = 1.5 * L^2	277.19	0.015	0.0	1	0
21	40290	SD0290				50340	5	9.1671	0.3026	0.2352	0	Modified SCS Curve Method	3.2	43	0.35	0.0	2	3.2	Based on A = 1.5 * L^2	247.21	0.015	0.0	1	0
22	40370	SD0370	including 0.48ha ds of Mainway			60370	5	17.93	0.6598	0.5233	0	Modified SCS Curve Method	1.5	42	0.28	0.0	2	1.5	Based on A = 1.5 * L^2	345.74	0.015	0.0	1	0
23	40410	SD0410				50410	5	7.9179	0.286	0.2507	0	Modified SCS Curve Method	1.1	574	0.35	0.0	2	1.1	Based on A = 1.5 * L^2	229.75	0.015	0.0	1	0
24	40420	SD0420	Future			50421009	5	67.5711	0.31	0.25	0	Modified SCS Curve Method	1.9	89	0.24	0.0	2	1.9	Based on A = 1.5 * L^2	671.17	0.015	0.0	1	0
25	40430	SD0430	Future			50430	5	32.4341	0.66	0.64	0	Modified SCS Curve Method	3.5	102	0.32	0.0	2	3.5	Based on A = 1.5 * L^2	465	0.015	0.0	1	0
26	40440	SD0440	Future			50440	5	57.1147	0.66	0.65	0	Modified SCS Curve Method	2.5	45	0.29	0.0	2	2.5	Based on A = 1.5 * L^2	617.06	0.015	0.0	1	0
27	40450	SD0450	Future			50450	5	30.3967	0.44	0.41	0	Modified SCS Curve Method	0.8	150	0.30	0.0	2	0.8	Based on A = 1.5 * L^2	450.16	0.015	0.0	1	0
28	40460	SD0460				50460	5	22.3997	0.6856	0.5284	0	Modified SCS Curve Method	2.4	40	0.28	0.0	2	2.4	Based on A = 1.5 * L^2	386.43	0.015	0.0	1	0
29	40470	SD0470	Future			50470	5	90.1904	0.66	0.54	0	Modified SCS Curve Method	1.4	40	0.28	0.0	2	1.4	Based on A = 1.5 * L^2	775.42	0.015	0.0	1	0
30	40480	SD0480				50480	5	56.4298	0.7588	0.5898	0	Modified SCS Curve Method	1.9	40	0.26	0.0	2	1.9	Based on A = 1.5 * L^2	613.35	0.015	0.0	1	0
31	40490	SD0490				50490	5	16.7613	0.7518	0.6042	0	Modified SCS Curve Method	1.4	53	0.27	0.0	2	1.4	Based on A = 1.5 * L^2	334.28	0.015	0.0	1	0
32	40810	SD0810				50810	5	20.6372	0.7713	0.6123	0	Modified SCS Curve Method	2.1	40	0.26	0.0	2	2.1	Based on A = 1.5 * L^2	370.92	0.015	0.0	1	0
33	40500	SD0500				50500	5	9.323	0.2699	0.1748	0	Modified SCS Curve Method	3.2	47	0.35	0.0	2	3.2	Based on A = 1.5 * L^2	249.31	0.015	0.0	1	0
34	40600	SD0600				60600	5	78.3696	0.6908	0.5626	0	Modified SCS Curve Method	1.2	47	0.26	0.0	2	1.2	Based on A = 1.5 * L^2	722.82	0.015	0.0	1	0
35	40610	SD0610				50600	5	3.9381	0.4452	0.3162	0	Modified SCS Curve Method	2.9	40	0.34	0.0	2	2.9	Based on A = 1.5 * L^2	162.03	0.015	0.0	1	0
36	40620	SD0620				50610	5	5.6694	0.7585	0.6066	0	Modified SCS Curve Method	1.5	43	0.27	0.0	2	1.5	Based on A = 1.5 * L^2	194.41	0.015	0.0	1	0
37	40640	SD0640				50630	5	2.1323	0.4254	0.3160	0	Modified SCS Curve Method	1.7	45	0.33	0.0	2	1.7	Based on A = 1.5 * L^2	119.23	0.015	0.0	1	0
38	40630	SD0630				50640	5	20.5363	0.6395	0.5266	0	Modified SCS Curve Method	1.4	42	0.27	0.0	2	1.4	Based on A = 1.5 * L^2	370.01	0.015	0.0	1	0
39	40670	SD0670	Future			50670	5	50.7614	0.73	0.72	0	Modified SCS Curve Method	1.5	82	0.28	0.0	2	1.5	Based on A = 1.5 * L^2	581.73	0.015	0.0	1	0
40	40700	SD0700				50680	5	10.8563	0.5732	0.5511	0	Modified SCS Curve Method	2.3	47	0.35	0.0	2	2.3	Based on A = 1.5 * L^2	269.03	0.015	0.0	1	0
41	40680	SD0680				50690	5	1.1955	0.4195	0.3892	0	Modified SCS Curve Method	0.6	69	0.35	0.0	2	0.6	Based on A = 1.5 * L^2	89.27	0.015	0.0	1	0
42	40690	SD0690				50690	5	25.4937	0.3111	0.275	0	Modified SCS Curve Method	3.1	40	0.35	0.0	2	3.1	Based on A = 1.5 * L^2	412.26	0.015	0.0	1	0
43	40710	SD0710				50710	5	6.3542	0.2465	0.2075	0	Modified SCS Curve Method	3.9	41	0.36	0.0	2	3.9	Based on A = 1.5 * L^2	205.82	0.015	0.0	1	0
44	40720	SD0720				70150	5	25.0371	0.8435	0.8366	0	Modified SCS Curve Method	3	40	0.27	0.0	2	3	Based on A = 1.5 * L^2	408.55	0.015	0.0	1	0
45	40730	SD0730	Future			70160	5	14.1545	0.76	0.75	0	Modified SCS Curve Method	3.1	41	0.29	0.0	2	3.1	Based on A = 1.5 * L^2	307.19	0.015	0.0	1	0
46	40770	SD0770	Future			70170	5	69.4286	0.81	0.80	0	Modified SCS Curve Method	1.7	43	0.27	0.0	2	1.7	Based on A = 1.5 * L^2	680.34	0.015	0.0	1	0
47	40780	SD0780	Future			50780	5	24.5717	0.52	0.50	0	Modified SCS Curve Method	1.5	43	0.33	0.0	2	1.5	Based on A = 1.5 * L^2	404.74	0.015	0.0	1	0

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	DT [min]	AREA [ha]	TIMP	XIMP	DWF [m³/s]	LOSS	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI Type	LGI [m]	MNI	SCI [hr]	STORM INDEX	RAIN [mm/hr]
48	40790	SD0790	imp%, ia, mnp, and cn corrected based on imagery			50795	5	8.1823	0.657	0.628	0	Modified SCS Curve Method	1.2	52	0.27	0.0	2	1.2	Based on A = 1.5 * L^2	233.56	0.015	0.0	1	0
49	40800	SD0800	Future			50795	5	5.15	0.904	0.902	0	Modified SCS Curve Method	1.4	48	0.33	0.0	2	1.4	Based on A = 1.5 * L^2	185.29	0.015	0.0	1	0
50	40805	SD0805				50790	5	3.57	0.395	0.347	0	Modified SCS Curve Method	2.0	40.0	0.25	0.0	1.0	1.0	Based on A = 1.5 * L^2	154.27	0.013	0.0	1	0
51	40820	SD0820				50820	5	14.2052	0.2097	0.1298	0	Modified SCS Curve Method	2.3	44	0.39	0.0	2	2.3	Based on A = 1.5 * L^2	307.74	0.015	0.0	1	0
52	40830	SD0830				50840	5	45.5125	0.6671	0.5345	0	Modified SCS Curve Method	1.3	40	0.27	0.0	2	1.3	Based on A = 1.5 * L^2	550.83	0.015	0.0	1	0
53	40840	SD0840				50840	5	2.0425	0.2224	0.1444	0	Modified SCS Curve Method	3.2	69	0.37	0.0	2	3.2	Based on A = 1.5 * L^2	116.69	0.015	0.0	1	0
54	40850	SD0850				50850	5	26.3253	0.3092	0.2462	0	Modified SCS Curve Method	2	142	0.31	0.0	2	2	Based on A = 1.5 * L^2	418.93	0.015	0.0	1	0
55	40880	SD0880				60880	5	56.14	0.37	0.34	0	Modified SCS Curve Method	1.3	120	0.33	0.0	2	1.3	Based on A = 1.5 * L^2	611.77	0.015	0.0	1	0
56	40890	SD0890				50890	5	41.71	0.4373	0.3285	0	Modified SCS Curve Method	1.1	85	0.35	0.0	2	1.1	Based on A = 1.5 * L^2	527.32	0.015	0.0	1	0
57	40900	SD0900				90020	5	13.56	0.62	0.48	0	Modified SCS Curve Method	2.0	43.0	0.31	0.0	1.0	1.0	Based on A = 1.5 * L^2	300.67	0.015	0.0	1	0
58	40910	SD0910				50910	5	6.9164	0.6698	0.5291	0	Modified SCS Curve Method	1.7	44	0.28	0.0	2	1.7	Based on A = 1.5 * L^2	214.73	0.015	0.0	1	0
59	40651022	Bronte Creek Meadows - EXT22				50650	5	8.58	0.58	0.58	0	Modified SCS Curve Method	1.12	157.18	0.3	0.0	2	0.91	Manual Input	246.54	0.015	0.0	1	0
60	40651021	Bronte Creek Meadows - EXT21				50651034	5	1.21	0.79	0.79	0	Modified SCS Curve Method	0.54	157.2	0.03	0.0	2	0.64	Manual Input	63.89	0.013	0.0	1	0
61	40651017	Bronte Creek Meadows - EXT17				50651019	5	5.85	0.99	0.99	0	Modified SCS Curve Method	1.0	0.001	0.03	0.0	2	1.7	Manual Input	78.3	0.013	0.0	1	0
62	406510172	Bronte Creek Meadows - EXT17B				50651002	5	0.45	0.99	0.99	0	Modified SCS Curve Method	1.0	0.001	0.03	0.0	2	0.4	Manual Input	48.3	0.013	0.0	1	0
63	40651018	Bronte Creek Meadows - EXT18				50651034	5	2.90	0.80	0.80	0	Modified SCS Curve Method	0.6	124.91	0.03	0.0	2	0.7	Manual Input	166.18	0.013	0.0	1	0
64	40651020	Bronte Creek Meadows - EXT20				50651017	5	0.82	0.99	0.99	0	Modified SCS Curve Method	1.0	0.001	0.03	0.0	2	0.5	Manual Input	18.4	0.013	0.0	1	0
65	40651014	Bronte Creek Meadows - EXT14				30651002	5	26.5	0.50	0.30	0	Modified SCS Curve Method	2.0	30	0.025	0.0	2	2.0	Manual Input	420	0.013	0.0	1	0
66	406510171	Bronte Creek Meadows - EXT17A				50651002	5	3.93	0.99	0.99	0	Modified SCS Curve Method	1.0	0.001	0.03	0.0	2	0.4	Manual Input	115.5	0.013	0.0	1	0

ADDHYD Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET
1	50910	SDJ0910				
2	50890	SDJ0890				60900
3	50850	SDJ0850	Lakeshore Road West			50890
4	50840	SDJ0840	Great Lakes Boulevard			60840
5	50830	SDJ0830				60830
6	50500	SDJ0500				50830
7	50810	SDJ0810				50500
8	50490	SDJ0490	Burloak Drive			60490
9	50480	SDJ0480	Spruce Avenue			60480
10	50470	SDJ0470	New Street			60470
11	50460	SDJ0460				60460
12	50450	SDJ0450				60450
13	50440	SDJ0440	Harvester Road			60440
14	50430	SDJ0430/QEW/POI-17	QEW			60430
15	50420	SDJ0420/POI-16				60420
16	50410	SDJ0410				50420
17	50400	SDJ0400				60400
18	50390	SDJ0390				50400
19	50350	SDJ0350/POI-1				60350
20	50110	SDJ0110				50350
21	50090	SDJ0090	Upper Middle Rd			60100
22	50080	SDJ0080				60080
23	50070	SDJ0070				50080
24	50040	SDJ0040				60050
25	50220	SDJ0220				70010
26	50020	SDJ0020				60020
27	50010	SDJ0010				60010
28	50340	SDJ0340				50350
29	50300	SDJ0300	Upper Middle Rd			60300
30	50280	SDJ0280				60280
31	50270	SDJ0270				50280
32	50260	SDJ0260				60260
33	50250	SDJ0250				60250
34	50160	SDJ0160				50250
35	50140	SDJ0140	Downstream of Dundas St			60140
36	50180	SDJ0180				50140
37	50130	SDJ0130				60130
38	50120	SDJ0120	Dundas St and Appleby Line			50140
39	50210	SDJ0210	Dundas Street			60210
40	50200	SDJ0200				50210
41	50820	SDJ0820				50830
42	50800	SDJ0800				60800
43	50780	SDJ0780	Rebecca Street			50800
44	50770	SDJ0770				60770
45	50730	SDJ0730	CNR Oakville			60730
46	50710	SDJ0710				50730
47	50700	SDJ0700				60700
48	50680	SDJ0680				50700

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET
49	50670	SDJ0670/QEW/POI-25	QEW			60670
50	50650	SDJ0650/Confluence of Heine Court Storm Sewer with Sheldon Creek (East Branch)/POI-24	Mainway			60650
51	50640	SDJ0640/POI-18	Upper Middle Road			30651001
52	50630	SDJ0630				50640
53	50610	SDJ0610				60620
54	50600	SDJ0600				60610
55	50690	SDJ0690				50700
56	50790	SDJ0790				50800
57	50795	SDJ0795				70180
58	50651021	Flows from POI-30 & POI-32 - Minor via Mainway & Heine Court Storm Sewers & Major via Overland spill from Mainway to Heine Court (To Sheldon Creek Tributary)				50650
59	50651024	POI-33				50651023
60	50651005	POI-27/Major Flows from POI-100				60651006
61	50651027	ADD1				50651028
62	50651017	Flows from POI-31 - Major via Overland spill from Site to Mainway				50651018
63	50651003	Add 2				60651005
64	50651023	POI-36				50651025
65	50651002	POI-26				50651003
66	50651007	POI-31/Summation to Mainway				50651009
67	50651032	POI-20/Minor Flows from POI-100				50651033
68	50651033	AddHyd - 2				60651003
69	50651026	Intersection of Bronte Creek Tribs within Bronte Park/POI-38				
70	50651031	POI-23				50650
71	50651019	Flows from POI-30 & POI-32 - Major via Overland spill from Burloak Drive				50651020
72	50651025	To Bronte Creek Tributary Via Burloak Drive Ditch/Overland spill from Mainway to Overland Flow Route through Reimer Business Park/POI-37				60651009
73	50651029	POI-21				50651030
74	50651008	POI-32				50651007
75	50651022	POI-35				50651023
76	50651028	ADD 105				60651001
77	50651030	AddHyd - 18				60651002
78	50651006	POI-30				60651007
79	50361002	POI-11 / To Sheldon Creek Via Mainway and John Lucas Drive Storm Sewers				50360
80	50361003	To Sheldon Creek Via Overland Flow				50360
81	50421008	POI-13				50421007
82	50421007	To Sheldon Creek Via Mainway and Sutton Drive Storm Sewers/POI-14				50421009
83	50361001	POI-7				50361002
84	50421004	POI-10				50421005
85	50421005	ADD5				50421006
86	50421003	POI-8				50421006
87	50421006	POI-12				50421007
88	50421001	ADD1				50421002
89	50360	SDJC360/Confluence SWMF2 Outlet and Sheldon Creek West Branch/POI-15				60390
90	70012	AddHyd - 70012				60040
91	50421009	POI-30				50420
92	50651012	CULVERT CLOSED				50651015
93	50651010	CULVERT OPEN				50651013
94	50651034	AddHyd - 43				50651011
95	50651020	AddHyd - 21				60651008
96	50651001	POI-39				50651002

ROUTECHANNEL Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	Outlet	Erosion Index	DT [min]	CHLGTH [m]	CHSLOPE [%]	FPSLOPE [%]	VSN	NSEG	DIST/ELEV
1	60900	SDC0900				50910	☐	5	259.52	0.578	0.578	1.1	3	20
2	60840	SDC0840				50850	☐	5	684.424	0.508	0.508	1.1	3	15
3	60830	SDC0830				50840	☐	5	78.069	0.4	0.4	1.1	3	16
4	60490	SDC0490				50810	☐	5	887.51	0.418	0.418	1.1	3	20
5	60480	SDC0480				50490	☐	5	296.732	0.556	0.556	1.1	3	20
6	60470	SDC0470				50480	☐	5	614.237	0.4	0.4	1.1	3	20
7	60460	SDC0460				50470	☐	5	488.944	0.716	0.716	1.1	3	20
8	60450	SDC0450				50460	☐	5	712.185	0.702	0.702	1.1	3	16
9	60440	SDC0440				50450	☐	5	632.132	1.028	1.028	1.1	3	19
10	60430	SDC0430				50440	☐	5	566.994	1.146	1.146	1.1	3	17
11	60420	SDC0420				50430	☐	5	715.026	0.856	0.856	1.1	3	12
12	60400	SDC0400				50410	☐	5	574.211	0.751	0.751	1.1	3	9
13	60390	SDC0390				50390	☐	5	184.404	1.123	1.123	1.1	3	20
14	60350	SDC0350				50360	☐	5	1461.543	0.718	0.718	1.1	3	16
15	60100	SDC0100				50110	☐	5	325.209	0.701	0.701	1.1	3	8
16	60080	SDC0080				50090	☐	5	482.561	0.4	0.4	1.1	3	14
17	60060	SDC0060				50070	☐	5	340.438	0.438	0.438	1.1	3	18
18	60050	SDC0050				60060	☐	5	394.305	0.68	0.68	1.1	3	9
19	60040	SDC0040				50040	☐	5	1276.329	0.493	0.493	1.1	3	20
20	60020	SDC0020				50220	☐	5	227.287	0.4	0.4	1.1	3	20
21	60010	SDC0010				50020	☐	5	1469.526	0.7	0.7	1.1	3	20
22	60300	SDC0300				50340	☐	5	205.049	0.624	0.624	1.1	3	9
23	60280	SDC0280				50300	☐	5	307.123	0.674	0.674	1.1	3	10
24	60260	SDC0260				50270	☐	5	1059.869	0.703	0.703	1.1	3	17
25	60250	SDC0250				50260	☐	5	723.506	0.4	0.4	1.1	3	20
26	60150	SDC0150				50160	☐	5	211.238	0.4	0.4	1.1	3	20
27	60140	SDC0140				60150	☐	5	380.765	0.4	0.4	1.1	3	20
28	60130	SDC0130				50180	☐	5	1409.181	0.563	0.563	1.1	3	20
29	60210	SDC0210				50120	☐	5	303.156	0.4	0.4	1.1	3	14
30	60190	SDC0190				50200	☐	5	411.633	0.476	0.476	1.1	3	20
31	60240	SDC0240				50250	☐	5	631.264	0.998	0.998	1.1	3	12
32	60370	SDC0370				50400	☐	5	141.395	1.061	1.061	1.1	3	18
33	60800	SDC0800				50820	☐	5	1086.985	0.713	0.713	1.1	3	20
34	60770	SDC0770				50780	☐	5	248.835	0.402	0.402	1.1	3	20
35	60730	SDC0730				50770	☐	5	1942.723	0.618	0.618	1.1	3	14
36	60700	SDC0700				50710	☐	5	918.943	1.02	1.02	1.1	3	20
37	60670	SDC0670/Sheldon Creek (East Branch) Channel South of Mainway through SD0670				50680	☐	5	486.895	0.719	0.719	1.1	3	11
38	60650	SDC0650/Sheldon Creek (East Branch) Channel South of Mainway through EXT-22				50670	☐	5	326.005	0.975	0.975	1.1	3	18
39	60620	SDC0620				50630	☐	5	178.164	0.78	0.78	1.1	3	20
40	60610	SDC0610				50610	☐	5	332.857	0.427	0.427	1.1	3	20
41	60600	SDC0600				50600	☐	5	375.554	0.533	0.533	1.1	3	16
42	60880	SDC0880				80880	☐	5	725.603	0.729	0.729	1.1	3	14
43	60651008	Bronte Creek Meadows - EXT18 Channel				50651025	☐	5	320.276	0.56	0.56	1.1	2	4
44	60651006	Bronte Creek Meadows - 120 Channel Upper				50651006	☐	5	119.167	0.86	0.86	1.1	3	19
45	60651009	Bronte Creek Meadows - EXT16 Channel				50651026	☐	5	939.579	1.2	1.2	1.1	3	20
46	60651007	Bronte Creek Meadows - 120 Channel Lower				50651007	☐	5	131.05	1.1	1.1	1.1	3	18
47	60651004	Bronte Creek Meadows - 104 Channel				50651032	☐	5	172.89	0.45	0.45	1.1	4	16
48	60651003	Bronte Creek Meadows - 121 Channel				50651031	☐	5	178.372	1.1	1.1	1.1	3	19
49	60651005	Bronte Creek Meadows - 129 Channel				50651004	☐	5	915.166	1.1	1.1	1.1	3	16
50	60651001	Bronte Creek Meadows - 105 Channel				50651029	☐	5	946.537	1.1	1.1	1.1	3	17
51	60651002	Bronte Creek Meadows - 134 Channel				50651031	☐	5	208.607	0.30	0.30	1.1	3	19

JUNCTION, DIVERTHYD, DUHYD, ROUTEPIPE & RESERVOIR Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	Delineate
1	70011	Pond 804 Overflow				70012	☐
2	70151	Pond 825 Overflow				50730	☐
3	70161	Pond 826 Overflow				50730	☐
4	70171	Pond 824 Overflow				50770	☐
5	70181	Pond 823 Overflow				50790	☐
6	30651004	Ex. East Orchard SWM Facility Overflow				50651001	☐
7	30651003	Ex. East Online SWM Pond 804 Overflow				50651027	☐

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	FLOWTABLE
1	50651004	Diversion at North side of Mainway Woodlot/POI-100				7
2	50651016	Diversion at North side of Mainway/POI-101	DIVERT24			17
3	50651018	Diversion at South side of Mainway/POI-102				20
4	50421002	SCW-1 SPLIT/POI-104				3
5	50651015	Mainway DDICB ACTIVE				3
6	50651009	Mainway Culvert INACTIVE				3
7	50651013	Mainway Culvert Capacity				4
8	50651011	Reimer Business Park 5-YR Contributations to Mainway Culvert				4

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	FLOW	CINLET [m³/s]	NINLET
1	90020	SDD0020	1200 mm Storm Sewer			☐	0.96	1

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	Outlet	DT [min]	PIPE	PLENGTH [m]	ROUGH	PSLOPE [m/m]	TYPE	DIAM [mm]	WIDTH [mm]	HEIGHT [mm]
1	80880	SDP0880	size unkown			50890	5	1	888.034	0.013	0.0035	Rectangular	1	2400	1900
2	50651014	Bronte Creek Meadows - EXT18 Channel/Existing Box Culvert under Mainway				50651025	5	1	372	0.013	0.0035	Rectangular	1650	2400	900

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (7) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (7) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	Outlet	DT [min]	Overflow ?	Type	Rating Curve	Shape	TSS (%)	TP (%)	Side Slope	Cw [m⁰·⁵/s]	Cwr [m⁰·⁵/s]	Cwt [m⁰·⁵/s]
1	70010	SDSU804/Pond 804	Pond 804			70012	5	☑	ManualInput	19	Unknown	75	60	0.0	1.839	1.839	1.839
2	70150	SDSU825/Pond 825	Pond 825			50730	5	☑	ManualInput	19	Unknown	75	60	0.0	1.839	1.839	1.839
3	70160	SDSU826/Pond 826	Pond 826			50730	5	☑	ManualInput	19	Unknown	75	60	0.0	1.839	1.839	1.839
4	70170	SDSU824/Pond 824	Pond 824			50770	5	☑	ManualInput	5	Unknown	75	60	0.0	1.839	1.839	1.839
5	70180	SDSU823/Pond 823	Pond 823			50790	5	☑	ManualInput	18	Unknown	75	60	0.0	1.839	1.839	1.839
6	30651002	Ex. East Orchard SWM Facility				30651004	5	☑	ManualInput	9	Unknown	80	60	0.0	1.839	1.839	1.839
7	30651001	Ex. East Online SWM Pond 808				50651027	5	☑	ManualInput	19	Unknown	80	60	0.0	1.839	1.839	1.839

READHYD Parameters - 100yr
(Inter-watershed spills modeled)

NasHyd (48) | StandHyd (66) | AddHyd (96) | Junction (6) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (6) | ReadHyd (1)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	FilePN
1	400	ReadHyd - 400				50010	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\APtoSD_100Y.HYD

READHYD Parameters - Regional
(Inter- & intra-watershed spills modeled)

NasHyd (48) | StandHyd (66) | AddHyd (95) | Junction (2) | DivertHyd (8) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (2) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	FilePN
1	407	Appleby Hwy 407				50010	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\APtoSD_REG_Updated.HYD
2	414	ReadHyd - 414				50140	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\SD_Node50140_Reg.HYD
3	416	ReadHyd - 416				50110	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\SD_Node50110_Reg.HYD

Note:
25mm Water Quality Event - Page 79 (Line 24144)
2-year - Page 27 (Line 8075)
5-year - Page 112 (Line 34178)
10-year - Page 1 (Line 35)
25-year - Page 53 (Line 16100)
50-year - Page 138 (Line 42212)


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00001> ================================================================================
00002>
00003>        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
00004>        V    V   I    SS     U   U   A A   L
00005>         V  V    I     SS    U   U  AAAAA  L
00006>         V  V    I      SS   U   U  A   A  L
00007>          VV     I    SSSSS  UUUUU  A   A  LLLLL
00008>
00009>         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
00010>        O   O    T      T    H   H   Y Y   MM MM  O   O
00011>        O   O    T      T    H   H    Y    M M M  O   O
00012>         OOO     T      T    H   H    Y    M   M   OOO
00013> Developed and Distributed by Smart City Water Inc
00014> Copyright 2007 - 2022 Smart City Water Inc
00015> All rights reserved.
00016>
00017>
00018>                  *****  D E T A I L E D   O U T P U T *****
00019>
00020>
00021>   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
00022>   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
00023>   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
00024>
00025>
00026> DATE: 02/19/2026                          TIME: 02:35:30
00027>
00028> USER:
00029>
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00031>
00032> COMMENTS: _____________________________________________________
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00034>
00035> --------------------------------------------------------------------------------
00036>   ************************************************
00037>   ** SIMULATION : 10 Year 12 hr 5 min SCS Type  **
00038>   ************************************************
00039>
00040>
00041> --------------------
00042> |    READ STORM    |    Filename: C:\Users\DPham\AppD
00043> |                  |              ata\Local\Temp\
00044> |                  |              257afcce-e1cf-4cdb-b646-cb15a9fd682a\5686701d
00045> | Ptotal= 72.52 mm |    Comments: 10 Year 12 hr 5 min SCS Type II CC
00046> --------------------
00047>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
00048>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
00049>                  0.00    1.81 |  3.08    2.90 |  6.17   13.03 |  9.25    2.53
00050>                  0.08    1.81 |  3.17    2.90 |  6.25   13.03 |  9.33    2.53
00051>                  0.17    1.81 |  3.25    2.90 |  6.33   13.03 |  9.42    2.53
00052>                  0.25    1.81 |  3.33    2.90 |  6.42   13.03 |  9.50    2.53
00053>                  0.33    1.81 |  3.42    2.90 |  6.50    5.79 |  9.58    2.53
00054>                  0.42    1.81 |  3.50    2.90 |  6.58    5.79 |  9.67    2.53
00055>                  0.50    1.81 |  3.58    2.90 |  6.67    5.79 |  9.75    2.53
00056>                  0.58    1.81 |  3.67    2.90 |  6.75    5.79 |  9.83    2.53
00057>                  0.67    1.81 |  3.75    2.90 |  6.83    5.79 |  9.92    2.53
00058>                  0.75    1.81 |  3.83    2.90 |  6.92    5.79 | 10.00    1.45
00059>                  0.83    1.81 |  3.92    2.90 |  7.00    4.34 | 10.08    1.45
00060>                  0.92    1.81 |  4.00    4.34 |  7.08    4.34 | 10.17    1.45
00061>                  1.00    1.81 |  4.08    4.34 |  7.17    4.34 | 10.25    1.45
00062>                  1.08    1.81 |  4.17    4.34 |  7.25    4.34 | 10.33    1.45
00063>                  1.17    1.81 |  4.25    4.34 |  7.33    4.34 | 10.42    1.45
00064>                  1.25    1.81 |  4.33    4.34 |  7.42    4.34 | 10.50    1.45
00065>                  1.33    1.81 |  4.42    4.34 |  7.50    4.34 | 10.58    1.45
00066>                  1.42    1.81 |  4.50    5.79 |  7.58    4.34 | 10.67    1.45
00067>                  1.50    1.81 |  4.58    5.79 |  7.67    4.34 | 10.75    1.45
00068>                  1.58    1.81 |  4.67    5.79 |  7.75    4.34 | 10.83    1.45
00069>                  1.67    1.81 |  4.75    5.79 |  7.83    4.34 | 10.92    1.45
00070>                  1.75    1.81 |  4.83    5.79 |  7.92    4.34 | 11.00    1.45
00071>                  1.83    1.81 |  4.92    5.79 |  8.00    2.53 | 11.08    1.45
00072>                  1.92    1.81 |  5.00    8.69 |  8.08    2.53 | 11.17    1.45
00073>                  2.00    2.17 |  5.08    8.69 |  8.17    2.53 | 11.25    1.45
00074>                  2.08    2.17 |  5.17    8.69 |  8.25    2.53 | 11.33    1.45
00075>                  2.17    2.17 |  5.25    8.69 |  8.33    2.53 | 11.42    1.45
00076>                  2.25    2.17 |  5.33    8.69 |  8.42    2.53 | 11.50    1.45
00077>                  2.33    2.17 |  5.42    8.69 |  8.50    2.53 | 11.58    1.45
00078>                  2.42    2.17 |  5.50   34.75 |  8.58    2.53 | 11.67    1.45
00079>                  2.50    2.17 |  5.58   34.75 |  8.67    2.53 | 11.75    1.45
00080>                  2.58    2.17 |  5.67   34.75 |  8.75    2.53 | 11.83    1.45
00081>                  2.67    2.17 |  5.75   95.56 |  8.83    2.53 | 11.92    1.45
00082>                  2.75    2.17 |  5.83   95.56 |  8.92    2.53 | 12.00    1.45
00083>                  2.83    2.17 |  5.92   95.56 |  9.00    2.53 |
00084>                  2.92    2.17 |  6.00   13.03 |  9.08    2.53 |
00085>                  3.00    2.90 |  6.08   13.03 |  9.17    2.53 |
00086>
00087> --------------------------------------------------------------------------------
00088>
00089> --------------------
00090> | CALIB            |
00091> | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
00092> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
00093> --------------------   U.H. Tp(hrs)=   0.47
00094>
00095>      Unit Hyd Qpeak  (cms)=   3.502
00096>
00097>      PEAK FLOW       (cms)=   2.259 (i)
00098>      TIME TO PEAK    (hrs)=   6.333
00099>      RUNOFF VOLUME    (mm)=  31.709
00100>      TOTAL RAINFALL   (mm)=  72.519
00101>      RUNOFF COEFFICIENT   =   0.437
00102>
00103>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00104>
00105> --------------------------------------------------------------------------------
00106> --------------------
00107> | CALIB            |
00108> | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
00109> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
00110> --------------------   U.H. Tp(hrs)=   0.46
00111>
00112>      Unit Hyd Qpeak  (cms)=   4.557
00113>
00114>      PEAK FLOW       (cms)=   2.919 (i)
00115>      TIME TO PEAK    (hrs)=   6.333
00116>      RUNOFF VOLUME    (mm)=  31.633
00117>      TOTAL RAINFALL   (mm)=  72.519
00118>      RUNOFF COEFFICIENT   =   0.436
00119>
00120>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00121>
00122> --------------------------------------------------------------------------------
00123>
00124> --------------------
00125> | ADD HYD  ( 50010)|
00126> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00127> --------------------          (ha)    (cms)    (hrs)     (mm)
00128>         ID1= 1 ( 40010):    43.09   2.259     6.33    31.71
00129>       + ID2= 2 ( 40030):    54.88   2.919     6.33    31.63
00130>         ================================================
00131>         ID = 3 ( 50010):    97.97   5.179     6.33    31.67
00132>
00133>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00134> --------------------------------------------------------------------------------
00135> --------------------
00136> | ROUTE CHN( 60010)|
00137> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00138> --------------------
00139>                 <------ DATA FOR SECTION (   1.1) ------>
00140>                 Distance      Elevation       Manning
00141>                    0.00         160.98         0.0450
00142>                   10.00         160.83         0.0450
00143>                   20.00         160.72         0.0450
00144>                   30.00         160.67         0.0450
00145>                   40.00         160.61         0.0450
00146>                   50.00         160.60         0.0450
00147>                   60.00         160.55         0.0450
00148>                   70.00         160.65         0.0450
00149>                   80.00         159.78         0.0450
00150>                   90.00         157.33    0.0450 /0.0350  Main Channel
00151>                  100.00         157.18         0.0350      Main Channel
00152>                  110.00         158.55         0.0450
00153>                  120.00         160.34         0.0450
00154>                  130.00         160.29         0.0450
00155>                  140.00         160.30         0.0450
00156>                  150.00         160.38         0.0450
00157>                  160.00         160.53         0.0450
00158>                  170.00         160.58         0.0450
00159>                  180.00         160.51         0.0450
00160>                  190.00         160.53         0.0450
00161>
00162>       <---------------------- TRAVEL TIME TABLE ---------------------->
00163>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00164>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
00165>         0.15  157.33    .123E+04        0.4         0.43      57.39
00166>         0.32  157.50    .422E+04        2.5         0.88      27.82
00167>         0.49  157.67    .768E+04        6.3         1.20      20.47
00168>         0.66  157.83    .116E+05       11.5         1.45      16.89
00169>         0.83  158.00    .160E+05       18.2         1.67      14.70
00170>         0.99  158.17    .209E+05       26.5         1.86      13.18
00171>         1.16  158.34    .263E+05       36.3         2.03      12.06
00172>         1.33  158.51    .321E+05       47.9         2.19      11.18
00173>         1.50  158.68    .384E+05       62.7         2.40      10.21
00174>         1.67  158.84    .451E+05       79.9         2.60       9.41
00175>         1.84  159.01    .522E+05       99.0         2.79       8.79
00176>         2.00  159.18    .597E+05      120.2         2.96       8.28
00177>         2.17  159.35    .676E+05      143.3         3.11       7.86
00178>         2.34  159.52    .759E+05      168.5         3.26       7.51
00179>         2.51  159.69    .846E+05      195.8         3.40       7.20
00180>         2.68  159.86    .938E+05      224.4         3.52       6.97
00181>         2.85  160.02    .104E+06      254.6         3.61       6.78
00182>         3.02  160.19    .114E+06      287.5         3.70       6.62
00183>         3.18  160.36    .127E+06      315.8         3.64       6.72
00184>
00185>                                    <---- hydrograph ---->   <-pipe / channel->
00186>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
00187>                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
00188>    INFLOW : ID= 2 ( 50010)    97.97     5.18     6.33  31.67      0.44      1.08
00189>    OUTFLOW: ID= 1 ( 60010)    97.97     4.15     6.67  31.66      0.39      0.99
00190>
00191>
00192>
00193> --------------------------------------------------------------------------------
00194> --------------------
00195> | CALIB            |
00196> | STANDHYD ( 40020)|   Area     (ha)=  51.32
00197> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
00198> --------------------
00199>                                    IMPERVIOUS    PERVIOUS (i)
00200>      Surface Area     (ha)=      33.87         17.45
00201>      Dep. Storage     (mm)=       2.00          6.20
00202>      Average Slope     (%)=       1.30          1.30
00203>      Length            (m)=     584.91         50.00
00204>      Mannings n           =      0.015         0.290
00205>
00206>      Max.Eff.Inten.(mm/hr)=      95.56         78.46
00207>                over (min)       10.00         20.00
00208>      Storage Coeff.  (min)=       7.56 (ii)    18.62 (ii)
00209>      Unit Hyd. Tpeak (min)=      10.00         20.00
00210>      Unit Hyd. peak  (cms)=       0.13          0.06
00211>                                                          *TOTALS*
00212>      PEAK FLOW       (cms)=       6.53          2.01          7.943 (iii)
00213>      TIME TO PEAK    (hrs)=       6.00          6.17          6.00
00214>      RUNOFF VOLUME    (mm)=      70.52         38.76         56.55
00215>      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
00216>      RUNOFF COEFFICIENT   =       0.97          0.53          0.78
00217>
00218>
00219>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
00220>            CN*  =  79.5    Ia = Dep. Storage  (Above)
00221>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
00222>            THAN THE STORAGE COEFFICIENT.
00223>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00224>
00225> --------------------------------------------------------------------------------
00226>
00227> --------------------
00228> | ADD HYD  ( 50020)|
00229> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00230> --------------------          (ha)    (cms)    (hrs)     (mm)
00231>         ID1= 1 ( 40020):    51.32   7.943     6.00    56.55
00232>       + ID2= 2 ( 60010):    97.97   4.151     6.67    31.66
00233>         ================================================
00234>         ID = 3 ( 50020):   149.29   8.629     6.08    40.22
00235>
00236>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00237> --------------------------------------------------------------------------------
00238> --------------------
00239> | ROUTE CHN( 60020)|
00240> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00241> --------------------
00242>                 <------ DATA FOR SECTION (   1.1) ------>
00243>                 Distance      Elevation       Manning
00244>                    0.00         153.66         0.0450
00245>                    1.00         153.24         0.0450
00246>                    2.00         152.95         0.0450
00247>                    3.00         152.70         0.0450
00248>                    4.00         152.40         0.0450
00249>                    5.00         152.09         0.0450
00250>                    6.00         151.83         0.0450
00251>                    7.00         151.60         0.0450
00252>                    8.00         151.49    0.0450 /0.0350  Main Channel
00253>                    9.00         151.42         0.0350      Main Channel
00254>                   10.00         151.38         0.0350      Main Channel
00255>                   11.00         151.40         0.0350      Main Channel
00256>                   12.00         151.38         0.0350      Main Channel
00257>                   13.00         151.38         0.0350      Main Channel
00258>                   14.00         151.38         0.0350      Main Channel
00259>                   15.00         151.50    0.0350 /0.0450  Main Channel
00260>                   16.00         151.56         0.0450
00261>                   17.00         151.60         0.0450
00262>                   25.00         153.59         0.0450
00263>                   26.00         153.63         0.0450
00264>
00265>       <---------------------- TRAVEL TIME TABLE ---------------------->
00266>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00267>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
00268>         0.12  151.49    .140E+03        0.2         0.36      10.54
00269>         0.23  151.60    .355E+03        0.9         0.58       6.57
00270>         0.34  151.72    .624E+03        2.0         0.74       5.11
00271>         0.45  151.83    .916E+03        3.6         0.89       4.27
00272>         0.57  151.94    .123E+04        5.5         1.02       3.73
00273>         0.68  152.05    .157E+04        7.8         1.13       3.35
00274>         0.79  152.17    .193E+04       10.5         1.24       3.06
00275>         0.90  152.28    .231E+04       13.6         1.34       2.83
00276>         1.02  152.39    .271E+04       17.1         1.43       2.65
00277>         1.13  152.50    .314E+04       20.9         1.52       2.50
00278>         1.24  152.62    .358E+04       25.2         1.60       2.37
00279>         1.35  152.73    .405E+04       29.8         1.67       2.26
00280>         1.47  152.84    .454E+04       34.9         1.75       2.17
00281>         1.58  152.95    .505E+04       40.3         1.81       2.09
00282>         1.69  153.07    .558E+04       46.2         1.88       2.01
00283>         1.80  153.18    .614E+04       52.6         1.95       1.95
00284>         1.92  153.29    .672E+04       59.4         2.01       1.88
00285>         2.03  153.40    .731E+04       66.7         2.07       1.83
00286>         2.14  153.52    .793E+04       74.5         2.14       1.77
00287>
00288>                                    <---- hydrograph ---->   <-pipe / channel->
00289>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
00290>                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
00291>    INFLOW : ID= 2 ( 50020)   149.29     8.63     6.08  40.22      0.71      1.16
00292>    OUTFLOW: ID= 1 ( 60020)   149.29     8.64     6.08  40.22      0.71      1.16
00293>
00294>
00295>
00296> --------------------------------------------------------------------------------
00297> --------------------
00298> | CALIB            |
00299> | STANDHYD ( 40040)|   Area     (ha)=  70.68
00300> |ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
00301> --------------------
00302>                                    IMPERVIOUS    PERVIOUS (i)
00303>      Surface Area     (ha)=      52.31         18.38
00304>      Dep. Storage     (mm)=       2.00          6.00
00305>      Average Slope     (%)=       1.20          1.20
00306>      Length            (m)=     686.45         52.00
```

```
      Mannings n          =      0.015        0.280
      Max.Eff.Inten.(mm/hr)=      95.56       101.22
                    over (min)       10.00        20.00
      Storage Coeff.  (min)=       8.53 (ii)   18.78 (ii)
      Unit Hyd. Tpeak (min)=      10.00        20.00
      Unit Hyd. peak  (cms)=       0.12         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       9.31         2.74        11.267 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17         6.00
      RUNOFF VOLUME    (mm)=      70.52        42.25        59.21
      TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
      RUNOFF COEFFICIENT   =       0.97         0.58         0.82

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40040):    70.68  11.267     6.00    59.21
      + ID2= 2 ( 60020):   149.29   8.643     6.08    40.22
        ==========================================================
        ID = 3 ( 50220):   219.97  19.560     6.08    46.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.0560
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
    INFLOW : ID= 2 ( 50220)    219.973     19.560      6.08      46.32
    OUTFLOW: ID= 1 ( 70010)    219.973      5.152      7.17      46.30
    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =      0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 26.34
                    TIME SHIFT OF PEAK FLOW          (min)= 65.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  5.2064

--------------------------
| Junction Command(70011) |
--------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00

--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   219.97   5.152     7.17    46.30
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ==========================================================
        ID = 3 ( 70012):   219.97   5.152     7.17    46.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        148.49        0.0450
                   3.00        148.12        0.0450
                   6.00        148.07        0.0450
                   9.00        147.63        0.0450
                  12.00        147.56        0.0450
                  15.00        147.55        0.0450
                  18.00        147.46        0.0450
                  21.00        147.41        0.0450
                  24.00        147.36        0.0450
                  27.00        147.38        0.0450
                  30.00        147.22        0.0450
                  33.00        147.00        0.0450
                  36.00        146.34        0.0450
                  39.00        145.57        0.0350      Main Channel
                  42.00        145.39        0.0350      Main Channel
                  45.00        145.66        0.0350      Main Channel
                  48.00        146.68        0.0450
                  51.00        147.50        0.0450
                  55.00        148.22        0.0450
                  60.00        148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.09   145.48    .145E+03        0.0         0.25      83.65
        0.18   145.57    .581E+03        0.2         0.40      52.70
        0.35   145.74    .189E+04        1.1         0.73      29.09
        0.52   145.91    .348E+04        2.7         0.99      21.52
        0.68   146.07    .532E+04        5.0         1.19      17.84
        0.85   146.24    .740E+04        7.9         1.36      15.60
        1.02   146.41    .973E+04       11.5         1.51      14.07
        1.19   146.58    .123E+05       15.9         1.64      12.94
        1.35   146.74    .152E+05       21.2         1.78      11.93
        1.52   146.91    .183E+05       27.8         1.94      10.99
        1.69   147.08    .218E+05       35.0         2.05      10.39
        1.86   147.25    .259E+05       43.0         2.12      10.03
        2.02   147.41    .309E+05       50.6         2.09      10.18
        2.19   147.58    .383E+05       61.5         2.05      10.37
        2.36   147.75    .474E+05       77.1         2.07      10.25
        2.52   147.91    .571E+05       95.6         2.14       9.95
        2.69   148.08    .672E+05      116.0         2.20       9.65
        2.86   148.25    .783E+05      138.1         2.25       9.45
        3.03   148.42    .904E+05      163.4         2.31       9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 70012)  219.97     5.15    7.17  46.30      0.69      1.20
    OUTFLOW: ID= 1 ( 60040)  219.97     5.00    7.42  46.30      0.68      1.19


--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                                 IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       32.94         19.34
     Dep. Storage     (mm)=        2.00          6.30
     Average Slope     (%)=        3.30          3.30
     Length            (m)=      590.36         68.00
     Mannings n           =       0.015         0.270
     Max.Eff.Inten.(mm/hr)=       95.56         94.87
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=        5.75 (ii)    14.68 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.20          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        6.47          3.00         9.090 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=       70.52         41.84        55.90
     TOTAL RAINFALL   (mm)=       72.52         72.52        72.52
     RUNOFF COEFFICIENT   =        0.97          0.58         0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40050):    52.28   9.090     6.00    55.90
      + ID2= 2 ( 60040):   219.97   5.003     7.42    46.30
        ==========================================================
        ID = 3 ( 50040):   272.25   9.319     6.00    48.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        146.35        0.0450
                  16.00        145.17        0.0450
                  18.00        144.62        0.0450
                  20.00        143.50        0.0450
                  26.00        141.63        0.0350      Main Channel
                  30.00        142.17        0.0350      Main Channel
                  34.00        144.28        0.0450
                  38.00        145.27        0.0450
                  50.00        146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.25   141.88    .129E+03        0.2         0.54      12.17
        0.50   142.13    .516E+03        1.1         0.86       7.67
        0.74   142.38    .111E+04        3.4         1.21       5.42
        0.99   142.63    .184E+04        7.0         1.50       4.37
        1.24   142.87    .269E+04       11.9         1.75       3.76
        1.49   143.12    .366E+04       18.2         1.96       3.36
        1.74   143.37    .476E+04       25.9         2.15       3.06
        1.98   143.62    .597E+04       35.3         2.33       2.82
        2.23   143.87    .729E+04       46.5         2.52       2.61
        2.48   144.11    .869E+04       59.3         2.69       2.44
        2.73   144.36    .102E+05       74.3         2.88       2.28
        2.97   144.61    .118E+05       92.4         3.09       2.13
        3.22   144.86    .136E+05      111.6         3.24       2.03
        3.47   145.11    .156E+05      133.1         3.37       1.95
        3.72   145.35    .178E+05      152.6         3.38       1.94
        3.97   145.60    .206E+05      175.6         3.37       1.95
        4.21   145.85    .239E+05      204.3         3.37       1.95
        4.46   146.10    .279E+05      238.6         3.38       1.95
        4.71   146.35    .324E+05      279.0         3.40       1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50040)  272.25     9.32    6.00  48.14      1.11      1.61
    OUTFLOW: ID= 1 ( 60050)  272.25     8.48    6.00  48.14      1.06      1.57


--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        142.52        0.0450
                   2.00        142.41        0.0450
                   4.00        142.26        0.0450
                   6.00        142.08        0.0450
                   8.00        141.85        0.0450
                  10.00        141.61        0.0450
                  12.00        141.38        0.0450
                  14.00        141.11        0.0450
                  16.00        140.93        0.0450
                  18.00        140.83        0.0450
                  20.00        140.73        0.0350      Main Channel
                  22.00        140.55        0.0350      Main Channel
                  24.00        140.49        0.0350      Main Channel
                  26.00        140.65        0.0350      Main Channel
                  28.00        141.04        0.0450
                  30.00        141.72        0.0450
                  32.00        142.19        0.0450
                  40.00        142.50        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.08   140.57    .466E+02        0.0         0.23      24.59
        0.15   140.65    .155E+03        0.2         0.38      14.98
        0.23   140.73    .305E+03        0.5         0.51      11.12
        0.34   140.84    .598E+03        1.2         0.68       8.29
        0.45   140.95    .995E+03        2.3         0.80       7.09
        0.56   141.06    .147E+04        3.9         0.91       6.22
        0.68   141.17    .201E+04        6.1         1.04       5.45
        0.79   141.28    .259E+04        8.8         1.16       4.89
        0.90   141.39    .321E+04       12.0         1.27       4.47
        1.01   141.50    .389E+04       15.6         1.36       4.16
        1.12   141.61    .461E+04       19.7         1.45       3.90
        1.23   141.72    .537E+04       24.3         1.54       3.69
        1.34   141.84    .619E+04       29.4         1.61       3.52
        1.45   141.95    .707E+04       35.0         1.68       3.37
        1.56   142.06    .799E+04       41.1         1.75       3.24
        1.67   142.17    .898E+04       47.8         1.81       3.13
        1.79   142.28    .101E+05       54.6         1.85       3.07
        1.90   142.39    .113E+05       62.1         1.87       3.03
        2.01   142.50    .127E+05       70.3         1.88       3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 60050)  272.25     8.48    6.00  48.14      0.77      1.14
    OUTFLOW: ID= 1 ( 60060)  272.25     7.99    6.08  48.14      0.75      1.12


--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                                 IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.94          1.90
     Dep. Storage     (mm)=        2.00          7.70
```

```
      Average Slope     (%)=       2.60         2.60
      Length            (m)=     137.56        98.00
      Mannings n           =      0.015        0.320

      Max.Eff.Inten.(mm/hr)=      95.56        55.14
                    over (min)        5.00        20.00
      Storage Coeff.  (min)=       2.58 (ii)   19.01 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.29         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.20         0.18          0.326 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      70.52        38.36          46.80
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.53           0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40060):     2.84   0.326     6.00    46.80
      + ID2= 2 ( 60060):   272.25   7.994     6.08    48.14
        ====================================================
        ID = 3 ( 50070):   275.09   8.213     6.08    48.13

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      26.30        13.55
      Dep. Storage     (mm)=       2.00         5.60
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     515.42        72.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=      95.56        87.78
                    over (min)        5.00        20.00
      Storage Coeff.  (min)=       6.85 (ii)   19.19 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.29         1.73          6.517 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      70.52        41.59          57.21
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.57           0.79

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40080):    39.85   6.517     6.00    57.21
      + ID2= 2 ( 50070):   275.09   8.213     6.08    48.13
        ====================================================
        ID = 3 ( 50080):   314.94  13.814     6.00    49.28

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        141.24        0.0450
                  40.00        140.58        0.0450
                  50.00        140.57        0.0450
                  60.00        140.36        0.0450
                  70.00        140.19        0.0450
                  80.00        140.15        0.0450
                  90.00        139.70        0.0450
                 100.00        139.54        0.0350      Main Channel
                 110.00        139.97        0.0450
                 120.00        140.53        0.0450
                 130.00        140.63        0.0450
                 140.00        140.72        0.0450
                 150.00        140.87        0.0450
                 190.00        141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)       (min)
       0.09   139.63    .150E+03       0.1         0.18       43.53
       0.17   139.71    .598E+03       0.4         0.30       27.01
       0.26   139.80    .126E+04       1.1         0.42       19.24
       0.34   139.88    .209E+04       2.2         0.52       15.58
       0.43   139.97    .307E+04       3.8         0.60       13.36
       0.51   140.05    .420E+04       6.1         0.70       11.45
       0.60   140.14    .548E+04       9.0         0.79       10.19
       0.68   140.22    .714E+04      11.3         0.76       10.55
       0.77   140.31    .919E+04      15.7         0.82        9.77
       0.85   140.39    .115E+05      21.0         0.88        9.11
       0.94   140.48    .141E+05      27.4         0.94        8.54
       1.02   140.56    .169E+05      34.6         0.99        8.12
       1.11   140.65    .205E+05      41.1         0.97        8.32
       1.19   140.74    .248E+05      51.5         1.00        8.02
       1.28   140.82    .296E+05      64.0         1.04        7.70
       1.36   140.91    .348E+05      78.0         1.08        7.44
       1.45   140.99    .407E+05      93.6         1.11        7.24
       1.53   141.08    .472E+05     111.7         1.14        7.05
       1.62   141.16    .545E+05     132.2         1.17        6.87

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94   13.81    6.00  49.28      0.73      0.80
   OUTFLOW: ID= 1 ( 60080)  314.94   11.00    6.17  49.28      0.67      0.77


--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.99         3.46
      Dep. Storage     (mm)=       2.00         9.68
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     172.19        99.00
      Mannings n           =      0.015        0.370

      Max.Eff.Inten.(mm/hr)=      95.56        37.61
                    over (min)        5.00        25.00
      Storage Coeff.  (min)=       3.02 (ii)   24.55 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.27         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.16         0.23          0.288 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
      RUNOFF VOLUME    (mm)=      70.52        30.88          36.34
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.43           0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40090):     4.45   0.288     6.00    36.34
      + ID2= 2 ( 60080):   314.94  10.998     6.17    49.28
        ====================================================
        ID = 3 ( 50090):   319.39  11.232     6.17    49.10

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        138.71        0.0450
                   4.00        136.97        0.0450
                  28.00        135.94        0.0450
                  32.00        135.79        0.0350      Main Channel
                  36.00        135.23        0.0350      Main Channel
                  40.00        135.71    0.0350 /0.0450  Main Channel
                  54.00        136.96        0.0450
                  80.00        138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)       (min)
       0.16   135.39    .631E+02       0.1         0.44       12.42
       0.31   135.55    .253E+03       0.5         0.69        7.83
       0.47   135.71    .568E+03       1.6         0.91        5.97
       0.65   135.89    .114E+04       4.2         1.20        4.52
       0.84   136.07    .209E+04       8.7         1.35        4.02
       1.02   136.25    .342E+04      15.4         1.47        3.70
       1.20   136.44    .511E+04      24.8         1.58        3.44
       1.38   136.62    .718E+04      37.2         1.69        3.21
       1.57   136.80    .962E+04      53.1         1.79        3.02
       1.75   136.98    .124E+05      72.7         1.90        2.85
       1.93   137.17    .155E+05      97.8         2.05        2.64
       2.11   137.35    .188E+05     127.1         2.20        2.47
       2.30   137.53    .223E+05     160.4         2.34        2.31
       2.48   137.71    .259E+05     197.8         2.48        2.19
       2.66   137.90    .298E+05     239.5         2.61        2.07
       2.85   138.08    .339E+05     285.4         2.74        1.98
       3.03   138.26    .381E+05     335.6         2.86        1.89
       3.21   138.44    .426E+05     390.3         2.98        1.82
       3.39   138.63    .472E+05     449.4         3.10        1.75

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  319.39   11.23    6.17  49.10      0.91      1.39
   OUTFLOW: ID= 1 ( 60100)  319.39   10.99    6.25  49.10      0.90      1.39


--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      12.46        14.44
      Dep. Storage     (mm)=       2.00         6.20
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     423.45       125.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=      95.56        46.24
                    over (min)        5.00        30.00
      Storage Coeff.  (min)=       6.09 (ii)   28.77 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.19         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.86         1.05          3.390 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33           6.00
      RUNOFF VOLUME    (mm)=      70.52        38.68          52.19
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.53           0.72

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40100):    26.90   3.390     6.00    52.19
      + ID2= 2 ( 60100):   319.39  10.987     6.25    49.10
        ====================================================
        ID = 3 ( 50110):   346.28  12.716     6.17    49.34

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

      Unit Hyd Qpeak  (cms)=   3.961

      PEAK FLOW       (cms)=   2.648 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  33.468
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.462

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

      Unit Hyd Qpeak  (cms)=   4.875

      PEAK FLOW       (cms)=   3.657 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  35.738
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.493

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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```

```
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   2.648     6.33    33.47
      + ID2= 2 ( 40130):    63.82   3.657     6.42    35.74
        ==========================================================
        ID = 3 ( 50130):   108.42   6.279     6.33    34.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

Distance	Elevation	Manning	
0.00	155.27	0.0450	
2.00	155.23	0.0450	
4.00	155.21	0.0450	
6.00	155.08	0.0450	
8.00	154.94	0.0450	
10.00	154.68	0.0450	
12.00	154.21	0.0450	
14.00	153.90	0.0450	
16.00	153.41	0.0350	Main Channel
18.00	153.58	0.0350	Main Channel
20.00	153.72	0.0350 /0.0450	Main Channel
22.00	153.77	0.0450	
24.00	153.77	0.0450	
26.00	153.82	0.0450	
28.00	153.79	0.0450	
30.00	153.87	0.0450	
32.00	153.99	0.0450	
34.00	154.44	0.0450	
36.00	154.86	0.0450	
40.00	155.37	0.0450	

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	153.50	.107E+03	0.0	0.27	87.23
0.20	153.60	.429E+03	0.1	0.42	55.65
0.29	153.70	.991E+03	0.4	0.55	42.98
0.39	153.80	.201E+04	0.9	0.66	35.52
0.49	153.90	.408E+04	2.1	0.71	33.15
0.59	153.99	.651E+04	3.7	0.81	29.01
0.69	154.09	.916E+04	6.1	0.93	25.22
0.79	154.19	.120E+05	8.9	1.05	22.39
0.88	154.29	.149E+05	12.3	1.16	20.20
0.98	154.39	.179E+05	16.2	1.27	18.49
1.08	154.49	.211E+05	20.5	1.37	17.13
1.18	154.58	.244E+05	25.4	1.47	16.02
1.28	154.68	.278E+05	30.7	1.56	15.10
1.37	154.78	.314E+05	36.4	1.63	14.38
1.47	154.88	.351E+05	42.5	1.71	13.77
1.57	154.98	.391E+05	48.9	1.76	13.33
1.67	155.07	.433E+05	55.6	1.81	12.98
1.77	155.17	.478E+05	63.0	1.86	12.65
1.86	155.27	.528E+05	69.8	1.86	12.62

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50130)	108.42	6.28	6.33	34.80	0.69	0.94
OUTFLOW: ID= 1 (60130)	108.42	4.77	6.67	34.80	0.63	0.86

```
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
```

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	46.69	19.07	
Dep. Storage	(mm)=	2.00	6.30	
Average Slope	(%)=	1.30	1.30	
Length	(m)=	662.12	66.00	
Mannings n	=	0.015	0.290	
Max.Eff.Inten.	(mm/hr)=	95.56	81.73	
over	(min)	10.00	25.00	
Storage Coeff.	(min)=	8.14 (ii)	21.00 (ii)	
Unit Hyd. Tpeak	(min)=	10.00	25.00	
Unit Hyd. peak	(cms)=	0.13	0.05	
				TOTALS
PEAK FLOW	(cms)=	8.92	2.08	10.178 (iii)
TIME TO PEAK	(hrs)=	6.00	6.25	6.00
RUNOFF VOLUME	(mm)=	70.52	38.88	58.18
TOTAL RAINFALL	(mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT	=	0.97	0.54	0.80

```
       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76  10.178     6.00    58.18
      + ID2= 2 ( 60130):   108.42   4.773     6.67    34.80
        ==========================================================
        ID = 3 ( 50180):   174.18  11.145     6.00    43.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
```

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	5.74	8.05	
Dep. Storage	(mm)=	2.00	8.12	
Average Slope	(%)=	2.40	2.40	
Length	(m)=	303.13	131.00	
Mannings n	=	0.015	0.350	
Max.Eff.Inten.	(mm/hr)=	95.56	31.85	
over	(min)	5.00	35.00	
Storage Coeff.	(min)=	4.24 (ii)	30.57 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	35.00	
Unit Hyd. peak	(cms)=	0.24	0.04	
				TOTALS
PEAK FLOW	(cms)=	1.39	0.43	1.564 (iii)
TIME TO PEAK	(hrs)=	6.00	6.42	6.00
RUNOFF VOLUME	(mm)=	70.52	31.43	46.53
TOTAL RAINFALL	(mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT	=	0.97	0.43	0.64

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

Distance	Elevation	Manning	
0.00	155.90	0.0450	
1.00	154.69	0.0450	
2.00	154.30	0.0450	
3.00	154.00	0.0450 /0.0350	Main Channel
4.00	153.74	0.0350	Main Channel
5.00	153.51	0.0350	Main Channel
6.00	153.46	0.0350	Main Channel
7.00	153.77	0.0350	Main Channel
8.00	154.10	0.0350 /0.0450	Main Channel
9.00	154.50	0.0450	
10.00	154.84	0.0450	
11.00	155.13	0.0450	
12.00	155.26	0.0450	
13.00	155.32	0.0450	
14.00	155.42	0.0450	
15.00	155.52	0.0450	
16.00	155.62	0.0450	
17.00	155.69	0.0450	
18.00	155.76	0.0450	
20.00	155.88	0.0450	

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	153.57	.445E+02	0.0	0.32	21.18
0.22	153.68	.135E+03	0.2	0.51	13.45
0.33	153.79	.262E+03	0.4	0.66	10.46
0.43	153.89	.423E+03	0.8	0.79	8.73
0.54	154.00	.616E+03	1.3	0.90	7.61
0.68	154.14	.900E+03	2.4	1.09	6.30
0.81	154.27	.123E+04	3.8	1.27	5.40
0.95	154.41	.160E+04	5.5	1.42	4.83
1.08	154.54	.201E+04	7.6	1.55	4.43
1.22	154.68	.246E+04	9.9	1.67	4.12
1.35	154.81	.294E+04	12.7	1.78	3.86
1.48	154.94	.345E+04	15.8	1.88	3.65
1.62	155.08	.400E+04	19.2	1.97	3.48
1.75	155.21	.458E+04	22.9	2.05	3.34
1.89	155.35	.524E+04	26.8	2.11	3.26
2.02	155.48	.599E+04	31.4	2.16	3.18
2.16	155.62	.682E+04	36.5	2.20	3.12
2.29	155.75	.774E+04	41.9	2.23	3.08
2.43	155.89	.878E+04	48.0	2.25	3.05

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (40190)	13.78	1.56	6.00	46.53	0.57	0.93
OUTFLOW: ID= 1 (60190)	13.78	1.32	6.00	46.53	0.54	0.89

```
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
```

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	17.41	5.53	
Dep. Storage	(mm)=	2.00	6.75	
Average Slope	(%)=	3.00	3.00	
Length	(m)=	391.08	150.00	
Mannings n	=	0.015	0.290	
Max.Eff.Inten.	(mm/hr)=	95.56	39.03	
over	(min)	5.00	30.00	
Storage Coeff.	(min)=	4.62 (ii)	26.62 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	30.00	
Unit Hyd. peak	(cms)=	0.22	0.04	
				TOTALS
PEAK FLOW	(cms)=	4.44	0.35	4.612 (iii)
TIME TO PEAK	(hrs)=	6.00	6.33	6.00
RUNOFF VOLUME	(mm)=	70.52	33.83	61.25
TOTAL RAINFALL	(mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT	=	0.97	0.47	0.84

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40180):    13.89   2.731     6.00    61.14
      + ID2= 2 ( 40200):    22.94   4.612     6.00    61.25
        ==========================================================
        ID = 3 ( 50200):    36.83   7.343     6.00    61.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50200):    36.83   7.343     6.00    61.21
      + ID2= 2 ( 60190):    13.78   1.323     6.00    46.53
        ==========================================================
        ID = 1 ( 50200):    50.61   8.666     6.00    57.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.01	1.06
Dep. Storage	(mm)=	2.00	6.27
Average Slope	(%)=	0.90	0.90
Length	(m)=	201.21	118.00

```
      Mannings n           =      0.015        0.290
      Max.Eff.Inten.(mm/hr)=      95.56        34.04
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       4.45 (ii)   33.32 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.23         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.29         0.06          1.313 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      70.52        33.69         63.80
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.46          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40210):     6.07   1.313     6.00    63.80
      + ID2= 2 ( 50200):    50.61   8.666     6.00    57.21
        ================================================
        ID = 3 ( 50210):    56.68   9.979     6.00    57.92

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        152.62        0.0450
                    7.00        152.39        0.0450
                    8.00        152.02        0.0450
                    9.00        151.48        0.0450
                   10.00        151.01        0.0450
                   11.00        150.56    0.0450 /0.0350  Main Channel
                   12.00        150.38        0.0350      Main Channel
                   13.00        150.40        0.0350      Main Channel
                   14.00        150.36        0.0350      Main Channel
                   15.00        150.60    0.0350 /0.0450  Main Channel
                   16.00        150.99        0.0450
                   17.00        151.50        0.0450
                   18.00        151.91        0.0450
                   19.00        152.65        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.10   150.46    .580E+02        0.1         0.30      17.06
        0.20   150.56    .160E+03        0.3         0.48      10.57
        0.32   150.68    .314E+03        0.7         0.70       7.18
        0.44   150.80    .489E+03        1.4         0.89       5.71
        0.56   150.92    .686E+03        2.3         1.03       4.89
        0.69   151.04    .904E+03        3.5         1.16       4.35
        0.81   151.16    .114E+04        4.8         1.28       3.95
        0.93   151.29    .140E+04        6.4         1.38       3.66
        1.05   151.41    .167E+04        8.1         1.48       3.42
        1.17   151.53    .196E+04       10.1         1.57       3.22
        1.29   151.65    .227E+04       12.3         1.65       3.06
        1.41   151.77    .260E+04       14.8         1.73       2.93
        1.54   151.89    .295E+04       17.5         1.80       2.81
        1.66   152.01    .331E+04       20.4         1.87       2.70
        1.78   152.13    .369E+04       23.6         1.94       2.61
        1.90   152.26    .409E+04       27.0         2.00       2.52
        2.02   152.38    .451E+04       30.7         2.06       2.45
        2.14   152.50    .500E+04       33.4         2.03       2.49
        2.26   152.62    .563E+04       37.3         2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50210)    56.68     9.98    6.00  57.92      1.16      1.56
   OUTFLOW: ID= 1 ( 60210)    56.68     9.56    6.00  57.92      1.14      1.54

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.91         2.40
      Dep. Storage     (mm)=       2.00         6.17
      Average Slope     (%)=       0.60         0.60
      Length            (m)=     274.66        79.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      95.56        39.61
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       6.06 (ii)   30.18 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.19         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.21         0.14          2.267 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      70.52        34.37         62.48
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.47          0.86

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40220):    11.32   2.267     6.00    62.48
      + ID2= 2 ( 60210):    56.68   9.563     6.00    57.92
        ================================================
        ID = 3 ( 50120):    68.00  11.830     6.00    58.68

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50120):    68.00  11.830     6.00    58.68
      + ID2= 2 ( 50180):   174.18  11.145     6.00    43.63
        ================================================
        ID = 3 ( 50140):   242.18  22.974     6.00    47.85

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        152.29        0.0450
                    2.00        152.20        0.0450
                    4.00        152.17        0.0450
                    6.00        152.15        0.0450
                    8.00        151.78        0.0450
                   10.00        151.28        0.0450
                   12.00        150.79        0.0450
                   14.00        150.20    0.0450 /0.0350  Main Channel
                   16.00        149.82        0.0350      Main Channel
                   18.00        149.51        0.0350      Main Channel
                   20.00        149.24        0.0350      Main Channel
                   22.00        149.48        0.0350      Main Channel
                   24.00        150.00    0.0350 /0.0450  Main Channel
                   26.00        150.52        0.0450
                   28.00        151.14        0.0450
                   30.00        151.68        0.0450
                   32.00        152.11        0.0450
                   34.00        152.20        0.0450
                   35.00        152.27        0.0450
                   38.00        152.30        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.15   149.39    .694E+02        0.1         0.32      19.63
        0.31   149.54    .273E+03        0.4         0.53      11.92
        0.46   149.70    .577E+03        1.1         0.72       8.87
        0.61   149.85    .972E+03        2.2         0.87       7.30
        0.76   150.00    .145E+04        3.9         1.01       6.26
        0.93   150.16    .205E+04        6.4         1.18       5.36
        1.09   150.33    .274E+04        9.9         1.37       4.62
        1.25   150.49    .350E+04       14.2         1.54       4.11
        1.42   150.65    .434E+04       19.3         1.69       3.75
        1.58   150.82    .524E+04       25.2         1.83       3.47
        1.74   150.98    .621E+04       31.8         1.95       3.26
        1.91   151.14    .726E+04       39.2         2.06       3.09
        2.07   151.31    .839E+04       47.5         2.16       2.94
        2.23   151.47    .959E+04       56.6         2.25       2.82
        2.40   151.63    .109E+05       66.7         2.34       2.72
        2.56   151.80    .122E+05       77.6         2.41       2.63
        2.72   151.96    .137E+05       89.3         2.48       2.55
        2.89   152.12    .153E+05      102.0         2.55       2.49
        3.05   152.29    .172E+05      111.6         2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50140)    242.18    22.97    6.00  47.85      1.52      1.78
   OUTFLOW: ID= 1 ( 60140)    242.18    21.34    6.08  47.85      1.47      1.74

--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        151.02        0.0450
                    2.00        150.89        0.0450
                    4.00        150.73        0.0450
                    6.00        150.65        0.0450
                    8.00        150.38        0.0450
                   10.00        149.93        0.0450
                   12.00        149.51        0.0450
                   14.00        149.02    0.0450 /0.0350  Main Channel
                   16.00        148.64        0.0350      Main Channel
                   18.00        148.27        0.0350      Main Channel
                   20.00        148.39        0.0350      Main Channel
                   22.00        148.60        0.0350      Main Channel
                   24.00        148.94    0.0350 /0.0450  Main Channel
                   26.00        149.34        0.0450
                   28.00        149.66        0.0450
                   30.00        150.12        0.0450
                   32.00        150.45        0.0450
                   34.00        150.52        0.0450
                   36.00        150.60        0.0450
                   38.00        150.60        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.11   148.38    .283E+02        0.0         0.26      13.34
        0.22   148.49    .107E+03        0.2         0.44       7.98
        0.34   148.60    .226E+03        0.6         0.58       6.07
        0.45   148.72    .380E+03        1.3         0.72       4.90
        0.56   148.83    .563E+03        2.2         0.84       4.20
        0.67   148.94    .775E+03        3.5         0.95       3.72
        0.80   149.07    .105E+04        5.5         1.11       3.17
        0.93   149.20    .136E+04        8.2         1.27       2.77
        1.06   149.32    .170E+04       11.3         1.41       2.50
        1.18   149.45    .207E+04       14.9         1.52       2.31
        1.31   149.58    .248E+04       19.1         1.63       2.17
        1.44   149.71    .292E+04       23.8         1.72       2.05
        1.57   149.83    .340E+04       29.1         1.81       1.95
        1.70   149.96    .391E+04       34.9         1.89       1.87
        1.82   150.09    .445E+04       41.4         1.97       1.79
        1.95   150.22    .502E+04       48.4         2.04       1.73
        2.08   150.35    .563E+04       56.0         2.10       1.67
        2.21   150.47    .628E+04       63.9         2.15       1.64
        2.33   150.60    .702E+04       71.1         2.14       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 60140)    242.18    21.34    6.08  47.85      1.37      1.67
   OUTFLOW: ID= 1 ( 60150)    242.18    21.63    6.08  47.85      1.38      1.68

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40150)|   Area    (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.11         2.26
      Dep. Storage     (mm)=       2.00         6.34
      Average Slope     (%)=       2.30         2.30
      Length            (m)=     189.18        45.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      95.56        68.99
                    over (min)        5.00        15.00
      Storage Coeff.  (min)=       3.24 (ii)   12.45 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.27         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.74         0.27          0.972 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      70.52        36.45         54.21
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.50          0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  80.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40150):     5.37   0.972     6.00    54.21
      + ID2= 2 ( 60150):   242.18  21.626     6.08    47.85
        ================================================
        ID = 3 ( 50160):   247.54  22.132     6.08    47.99

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
01531> ------------------------------------------------------------------------------
01532> --------------------
01533> | CALIB             |
01534> | STANDHYD ( 40240)|   Area    (ha)=  10.28
01535> |ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
01536> --------------------
01537>                              IMPERVIOUS    PERVIOUS (i)
01538>      Surface Area     (ha)=       8.79         1.50
01539>      Dep. Storage     (mm)=       2.00         5.70
01540>      Average Slope     (%)=       3.40         3.40
01541>      Length            (m)=     261.85        70.00
01542>      Mannings n            =      0.015        0.270
01543>
01544>      Max.Eff.Inten.(mm/hr)=      95.56        59.97
01545>                   over (min)        5.00        10.00
01546>      Storage Coeff.  (min)=       3.50 (ii)    7.93 (ii)
01547>      Unit Hyd. Tpeak (min)=       5.00        10.00
01548>      Unit Hyd. peak  (cms)=       0.26         0.13
01549>                                                          *TOTALS*
01550>      PEAK FLOW       (cms)=       2.30         0.19          2.489 (iii)
01551>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
01552>      RUNOFF VOLUME    (mm)=      70.52        34.64          65.09
01553>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
01554>      RUNOFF COEFFICIENT   =       0.97         0.48           0.90
01555>
01556> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01557>
01558>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01559>            CN*  =  79.6    Ia = Dep. Storage  (Above)
01560>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01561>            THAN THE STORAGE COEFFICIENT.
01562>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01563>
01564> ------------------------------------------------------------------------------
01565> --------------------
01566> | CALIB             |
01567> | STANDHYD ( 40250)|   Area    (ha)=  13.36
01568> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
01569> --------------------
01570>                              IMPERVIOUS    PERVIOUS (i)
01571>      Surface Area     (ha)=       8.61         4.75
01572>      Dep. Storage     (mm)=       2.00         7.14
01573>      Average Slope     (%)=       2.00         2.00
01574>      Length            (m)=     298.43        70.00
01575>      Mannings n            =      0.015        0.320
01576>
01577>      Max.Eff.Inten.(mm/hr)=      95.56        53.75
01578>                   over (min)        5.00        20.00
01579>      Storage Coeff.  (min)=       4.44 (ii)   19.12 (ii)
01580>      Unit Hyd. Tpeak (min)=       5.00        20.00
01581>      Unit Hyd. peak  (cms)=       0.23         0.06
01582>                                                          *TOTALS*
01583>      PEAK FLOW       (cms)=       2.18         0.37          2.431 (iii)
01584>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
01585>      RUNOFF VOLUME    (mm)=      70.52        32.78          56.51
01586>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
01587>      RUNOFF COEFFICIENT   =       0.97         0.45           0.78
01588>
01589> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01590>
01591>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01592>            CN*  =  78.7    Ia = Dep. Storage  (Above)
01593>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01594>            THAN THE STORAGE COEFFICIENT.
01595>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01596>
01597> ------------------------------------------------------------------------------
01598> --------------------
01599> | ROUTE CHN( 60240)|
01600> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01601> --------------------
01602>                <------ DATA FOR SECTION (   1.1) ------>
01603>                Distance      Elevation       Manning
01604>                    0.00        155.56        0.0450
01605>                    2.00        155.23        0.0450
01606>                    4.00        154.58        0.0450
01607>                    6.00        153.92        0.0450
01608>                    8.00        153.53        0.0450
01609>                   10.00        152.64        0.0450
01610>                   12.00        152.43    0.0450 /0.0350  Main Channel
01611>                   14.00        152.24        0.0350      Main Channel
01612>                   16.00        152.07        0.0350      Main Channel
01613>                   18.00        152.30    0.0350 /0.0450  Main Channel
01614>                   20.00        152.46        0.0450
01615>                   22.00        155.55        0.0450
01616>
01617>       <---------------------- TRAVEL TIME TABLE ----------------------->
01618>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01619>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01620>         0.12   152.18    .895E+02       0.1         0.43       24.33
01621>         0.24   152.30    .356E+03       0.4         0.69       15.20
01622>         0.43   152.49    .118E+04       2.1         1.10        9.55
01623>         0.62   152.68    .234E+04       5.5         1.48        7.09
01624>         0.81   152.88    .361E+04      10.4         1.83        5.76
01625>         1.00   153.07    .494E+04      16.7         2.13        4.94
01626>         1.19   153.26    .634E+04      24.2         2.40        4.38
01627>         1.38   153.45    .781E+04      32.8         2.65        3.97
01628>         1.58   153.64    .936E+04      42.5         2.86        3.67
01629>         1.77   153.83    .110E+05      53.3         3.05        3.45
01630>         1.96   154.02    .128E+05      65.6         3.23        3.26
01631>         2.15   154.21    .147E+05      79.4         3.40        3.09
01632>         2.34   154.40    .167E+05      94.5         3.57        2.95
01633>         2.53   154.60    .188E+05     111.0         3.73        2.82
01634>         2.72   154.79    .209E+05     128.7         3.89        2.71
01635>         2.91   154.98    .231E+05     147.8         4.03        2.61
01636>         3.10   155.17    .255E+05     168.3         4.17        2.52
01637>         3.30   155.36    .279E+05     189.2         4.28        2.46
01638>         3.49   155.55    .305E+05     211.3         4.38        2.40
01639>
01640>                                    <---- hydrograph ---->   <-pipe / channel->
01641>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01642>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01643>    INFLOW : ID= 2 ( 40250)   13.36     2.43    6.00  56.51      0.45      1.13
01644>    OUTFLOW: ID= 1 ( 60240)   13.36     1.91    6.00  56.50      0.41      1.04
01645>
01646>
01647>
01648> ------------------------------------------------------------------------------
01649>
01650> --------------------
01651> | ADD HYD  ( 50250)|
01652> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01653> --------------------          (ha)    (cms)    (hrs)     (mm)
01654>         ID1= 1 ( 40240):    10.28   2.489     6.00    65.09
01655>       + ID2= 2 ( 50160):   247.54  22.132     6.08    47.99
01656>         ==================================================
01657>         ID = 3 ( 50250):   257.83  23.105     6.08    48.67
01658>
01659>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01660> ------------------------------------------------------------------------------
01661>
01662> --------------------
01663> | ADD HYD  ( 50250)|
01664> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
01665> --------------------          (ha)    (cms)    (hrs)     (mm)
01666>         ID1= 3 ( 50250):   257.83  23.105     6.08    48.67
01667>       + ID2= 2 ( 60240):    13.36   1.911     6.00    56.50
01668>         ==================================================
01669>         ID = 1 ( 50250):   271.19  24.920     6.08    49.06
01670>
01671>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01672> ------------------------------------------------------------------------------
01673> --------------------
01674> | ROUTE CHN( 60250)|
01675> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01676> --------------------
01677>                <------ DATA FOR SECTION (   1.1) ------>
01678>                Distance      Elevation       Manning
01679>                    0.00        149.47        0.0450
01680>                    3.00        149.39        0.0450
01681>                    6.00        149.18        0.0450
01682>                    9.00        148.85        0.0450
01683>                   12.00        148.60        0.0450
01684>                   15.00        148.16        0.0450
01685>                   18.00        147.81        0.0450
01686>                   21.00        147.50        0.0450
01687>                   24.00        147.26        0.0350      Main Channel
01688>                   27.00        146.88        0.0350      Main Channel
01689>                   30.00        146.72        0.0350      Main Channel
01690>                   33.00        147.27    0.0350 /0.0450  Main Channel
01691>                   36.00        147.60        0.0450
01692>                   39.00        147.71        0.0450
01693>                   42.00        148.10        0.0450
01694>                   45.00        148.90        0.0450
01695>                   48.00        149.05        0.0450
01696>                   51.00        149.12        0.0450
01697>                   54.00        149.43        0.0450
01698>                   57.00        149.67        0.0450
01699>
01700>       <---------------------- TRAVEL TIME TABLE ----------------------->
01701>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01702>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01703>         0.14   146.85    .156E+03       0.1         0.30       40.24
01704>         0.27   146.99    .583E+03       0.4         0.51       23.51
01705>         0.41   147.13    .119E+04       1.1         0.68       17.78
01706>         0.54   147.26    .198E+04       2.2         0.82       14.76
01707>         0.69   147.41    .309E+04       4.3         1.02       11.88
01708>         0.84   147.56    .455E+04       7.2         1.15       10.50
01709>         0.98   147.70    .637E+04      10.9         1.24        9.73
01710>         1.13   147.85    .862E+04      15.8         1.32        9.12
01711>         1.28   148.00    .111E+05      21.7         1.41        8.55
01712>         1.42   148.14    .139E+05      28.7         1.50        8.06
01713>         1.57   148.29    .169E+05      37.1         1.59        7.58
01714>         1.72   148.44    .200E+05      46.5         1.68        7.16
01715>         1.87   148.58    .233E+05      57.0         1.77        6.80
01716>         2.01   148.73    .268E+05      68.3         1.85        6.53
01717>         2.16   148.88    .305E+05      80.9         1.92        6.28
01718>         2.31   149.02    .345E+05      93.2         1.95        6.17
01719>         2.45   149.17    .391E+05     106.6         1.97        6.11
01720>         2.60   149.32    .441E+05     123.2         2.02        5.97
01721>         2.75   149.47    .495E+05     139.7         2.04        5.91
01722>
01723>                                    <---- hydrograph ---->   <-pipe / channel->
01724>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01725>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01726>    INFLOW : ID= 2 ( 50250)  271.19    24.92    6.08  49.06      1.35      1.45
01727>    OUTFLOW: ID= 1 ( 60250)  271.19    21.54    6.17  49.06      1.27      1.41
01728>
01729>
01730>
01731> ------------------------------------------------------------------------------
01732> --------------------
01733> | CALIB             |
01734> | STANDHYD ( 40260)|   Area    (ha)=  28.45
01735> |ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
01736> --------------------
01737>                              IMPERVIOUS    PERVIOUS (i)
01738>      Surface Area     (ha)=      15.93        12.52
01739>      Dep. Storage     (mm)=       2.00         6.70
01740>      Average Slope     (%)=       1.30         1.30
01741>      Length            (m)=     435.49        46.00
01742>      Mannings n            =      0.015        0.300
01743>
01744>      Max.Eff.Inten.(mm/hr)=      95.56        76.48
01745>                   over (min)        5.00        20.00
01746>      Storage Coeff.  (min)=       6.33 (ii)   17.18 (ii)
01747>      Unit Hyd. Tpeak (min)=       5.00        20.00
01748>      Unit Hyd. peak  (cms)=       0.19         0.06
01749>                                                          *TOTALS*
01750>      PEAK FLOW       (cms)=       3.05         1.46          4.072 (iii)
01751>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
01752>      RUNOFF VOLUME    (mm)=      70.52        37.69          51.80
01753>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
01754>      RUNOFF COEFFICIENT   =       0.97         0.52           0.71
01755>
01756>
01757>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01758>            CN*  =  78.7    Ia = Dep. Storage  (Above)
01759>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01760>            THAN THE STORAGE COEFFICIENT.
01761>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01762>
01763> ------------------------------------------------------------------------------
01764>
01765> --------------------
01766> | ADD HYD  ( 50260)|
01767> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01768> --------------------          (ha)    (cms)    (hrs)     (mm)
01769>         ID1= 1 ( 40260):    28.45   4.072     6.00    51.80
01770>       + ID2= 2 ( 60250):   271.19  21.541     6.17    49.06
01771>         ==================================================
01772>         ID = 3 ( 50260):   299.64  23.977     6.17    49.32
01773>
01774>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01775> ------------------------------------------------------------------------------
01776> --------------------
01777> | ROUTE CHN( 60260)|
01778> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01779> --------------------
01780>                <------ DATA FOR SECTION (   1.1) ------>
01781>                Distance      Elevation       Manning
01782>                    0.00        143.17        0.0450
01783>                    4.00        143.15        0.0450
01784>                    8.00        143.14        0.0450
01785>                   12.00        142.95        0.0450
01786>                   16.00        142.87        0.0450
01787>                   20.00        142.67        0.0450
01788>                   24.00        142.24        0.0450
01789>                   28.00        141.84        0.0450
01790>                   32.00        141.61        0.0450
01791>                   36.00        141.32        0.0450
01792>                   40.00        140.98        0.0450
01793>                   44.00        140.88        0.0450
01794>                   48.00        139.95        0.0350      Main Channel
01795>                   52.00        140.09        0.0350      Main Channel
01796>                   56.00        141.11        0.0450
01797>                   60.00        141.43        0.0450
01798>                   76.00        143.21        0.0450
01799>
01800>       <---------------------- TRAVEL TIME TABLE ----------------------->
01801>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01802>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01803>         0.17   140.12    .479E+03       0.2         0.48       36.89
01804>         0.34   140.29    .147E+04       1.2         0.86       20.63
01805>         0.51   140.46    .272E+04       2.9         1.12       15.78
01806>         0.68   140.63    .421E+04       5.3         1.33       13.28
01807>         0.85   140.80    .596E+04       8.5         1.51       11.69
01808>         1.02   140.97    .812E+04      12.0         1.56       11.29
01809>         1.19   141.14    .111E+05      17.6         1.68       10.52
01810>         1.36   141.31    .147E+05      25.4         1.83        9.67
01811>         1.53   141.48    .191E+05      34.9         1.93        9.14
01812>         1.70   141.65    .242E+05      46.4         2.03        8.71
01813>         1.87   141.81    .301E+05      59.9         2.11        8.38
01814>         2.04   141.98    .367E+05      76.6         2.21        7.99
01815>         2.21   142.15    .439E+05      95.9         2.31        7.63
01816>         2.37   142.32    .517E+05     117.9         2.42        7.30
01817>         2.54   142.49    .600E+05     142.7         2.52        7.01
01818>         2.71   142.66    .689E+05     170.3         2.62        6.74
01819>         2.88   142.83    .785E+05     198.2         2.68        6.60
01820>         3.05   143.00    .892E+05     225.9         2.68        6.58
01821>         3.22   143.17    .101E+06     250.7         2.63        6.73
01822>
01823>                                    <---- hydrograph ---->   <-pipe / channel->
01824>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01825>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01826>    INFLOW : ID= 2 ( 50260)  299.64    23.98    6.17  49.32      1.33      1.80
01827>    OUTFLOW: ID= 1 ( 60260)  299.64    21.10    6.25  49.32      1.26      1.74
01828>
01829>
01830>
01831> ------------------------------------------------------------------------------
01832> --------------------
01833> | CALIB             |
01834> | STANDHYD ( 40270)|   Area    (ha)=   9.83
01835> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
01836> --------------------
```

```
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12          6.71
     Dep. Storage     (mm)=       2.00          8.03
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     256.01         73.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=      95.56         53.51
                   over (min)     5.00         25.00
     Storage Coeff.  (min)=       4.84 (ii)    23.22 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.22          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.56          0.55          0.880 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25           6.00
     RUNOFF VOLUME    (mm)=      70.52         36.11          43.69
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.50           0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40270):     9.83   0.880     6.00    43.69
     + ID2= 2 ( 60260):   299.64  21.099     6.25    49.32
       ====================================================
       ID = 3 ( 50270):   309.47  21.753     6.25    49.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.16         11.14
     Dep. Storage     (mm)=       2.00          7.27
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     456.83         53.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=      95.56         77.52
                   over (min)     5.00         20.00
     Storage Coeff.  (min)=       6.85 (ii)    19.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.18          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.97          1.24          4.834 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      70.52         36.46          54.05
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.50           0.75


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40280):    31.30   4.834     6.00    54.05
     + ID2= 2 ( 50270):   309.47  21.753     6.25    49.14
       ====================================================
       ID = 3 ( 50280):   340.77  23.925     6.25    49.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        139.35        0.0450
                  3.00        139.19        0.0450
                  6.00        138.46        0.0450
                 27.00        137.71        0.0450
                 30.00        137.44        0.0350      Main Channel
                 33.00        137.26        0.0350      Main Channel
                 36.00        137.51        0.0350      Main Channel
                 39.00        137.64    0.0350 /0.0450  Main Channel
                 42.00        137.71        0.0450
                 57.00        139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   137.35    .361E+02       0.0          0.30       17.09
       0.18   137.44    .145E+03       0.2          0.48       10.76
       0.30   137.55    .369E+03       0.8          0.68        7.57
       0.41   137.67    .717E+03       1.9          0.82        6.28
       0.52   137.78    .124E+04       3.9          0.97        5.27
       0.63   137.89    .192E+04       6.8          1.10        4.67
       0.74   138.00    .273E+04      10.7          1.20        4.25
       0.86   138.11    .369E+04      15.7          1.30        3.93
       0.97   138.23    .480E+04      21.8          1.39        3.67
       1.08   138.34    .605E+04      29.1          1.48        3.46
       1.19   138.45    .745E+04      37.8          1.56        3.28
       1.31   138.56    .895E+04      48.6          1.67        3.07
       1.42   138.68    .105E+05      60.8          1.78        2.88
       1.53   138.79    .121E+05      74.4          1.89        2.71
       1.64   138.90    .138E+05      89.3          1.99        2.57
       1.76   139.01    .155E+05     105.5          2.10        2.44
       1.87   139.13    .172E+05     123.0          2.19        2.33
       1.98   139.24    .190E+05     140.8          2.27        2.25
       2.09   139.35    .209E+05     159.0          2.33        2.20

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    23.93    6.25  49.59      1.00      1.42
   OUTFLOW: ID= 1 ( 60280)  340.77    23.42    6.33  49.59      0.99      1.41


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.71          4.81
     Dep. Storage     (mm)=       2.00          7.99
     Average Slope     (%)=       1.60          1.60
     Length            (m)=     277.19         63.00
     Mannings n           =      0.015         0.340

     Max.Eff.Inten.(mm/hr)=      95.56         72.51
                   over (min)     5.00         20.00
     Storage Coeff.  (min)=       4.54 (ii)    18.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.23          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.34          0.52          1.701 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      70.52         35.02          50.98
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.48           0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40300):    11.53   1.701     6.00    50.98
     + ID2= 2 ( 60280):   340.77  23.419     6.33    49.59
       ====================================================
       ID = 3 ( 50300):   352.30  24.109     6.25    49.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        137.26        0.0450
                  4.00        136.94        0.0450
                  8.00        136.82        0.0450
                 12.00        136.69        0.0450
                 16.00        136.55        0.0450
                 36.00        135.52        0.0350      Main Channel
                 64.00        136.21        0.0450
                 75.00        136.49        0.0450
                 84.00        137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   135.61    .491E+02       0.1          0.26       12.99
       0.18   135.70    .196E+03       0.4          0.42        8.18
       0.27   135.79    .442E+03       1.2          0.55        6.24
       0.36   135.88    .785E+03       2.5          0.66        5.15
       0.45   135.97    .123E+04       4.6          0.77        4.44
       0.53   136.06    .177E+04       7.5          0.87        3.93
       0.62   136.15    .240E+04      11.3          0.96        3.55
       0.71   136.24    .314E+04      16.4          1.07        3.19
       0.80   136.32    .397E+04      23.3          1.20        2.84
       0.89   136.41    .490E+04      31.4          1.32        2.60
       0.98   136.50    .592E+04      40.8          1.42        2.41
       1.07   136.59    .701E+04      51.5          1.51        2.27
       1.16   136.68    .816E+04      63.4          1.59        2.14
       1.25   136.77    .938E+04      76.6          1.67        2.04
       1.34   136.86    .107E+05      91.2          1.75        1.95
       1.42   136.95    .120E+05     107.3          1.83        1.87
       1.51   137.04    .135E+05     125.8          1.91        1.78
       1.60   137.13    .149E+05     145.6          2.00        1.71
       1.69   137.22    .164E+05     166.8          2.08        1.64

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30    24.11    6.25  49.63      0.81      1.21
   OUTFLOW: ID= 1 ( 60300)  352.30    24.21    6.33  49.63      0.81      1.21


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77          6.39
     Dep. Storage     (mm)=       2.00          8.38
     Average Slope     (%)=       3.20          3.20
     Length            (m)=     247.21         43.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=      95.56         63.43
                   over (min)     5.00         15.00
     Storage Coeff.  (min)=       3.44 (ii)    12.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.26          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.57          0.68          1.152 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      70.52         34.06          42.63
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.47           0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40290):     9.17   1.152     6.00    42.63
     + ID2= 2 ( 60300):   352.30  24.212     6.33    49.63
       ====================================================
       ID = 3 ( 50340):   361.46  24.685     6.33    49.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50110):   346.28  12.716     6.17    49.34
     + ID2= 2 ( 50340):   361.46  24.685     6.33    49.46
       ====================================================
       ID = 3 ( 50350):   707.75  36.745     6.25    49.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        134.05        0.0450
                 24.00        133.67        0.0450
                 30.00        131.85        0.0450
                 36.00        131.42        0.0450
                 42.00        130.48        0.0450
                 48.00        130.42        0.0350      Main Channel
                 54.00        130.42        0.0350      Main Channel
                 60.00        130.62        0.0450
                 66.00        130.77        0.0450
                 72.00        131.03        0.0450
                 78.00        131.43        0.0450
                 84.00        131.38        0.0450
                 90.00        131.33        0.0450
                 96.00        131.98        0.0450
                102.00        133.31        0.0450
                120.00        133.95        0.0450
```

```
       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)     (cms)       (m/s)      (min)
        0.00   130.42    .133E+02       0.0         0.03     768.63
        0.19   130.61    .383E+04       1.6         0.61      40.07
        0.37   130.79    .994E+04       6.6         0.97      25.18
        0.56   130.98    .179E+05      15.1         1.23      19.81
        0.75   131.16    .272E+05      27.2         1.46      16.72
        0.93   131.35    .377E+05      42.2         1.64      14.88
        1.12   131.54    .521E+05      60.9         1.71      14.26
        1.30   131.72    .683E+05      87.2         1.86      13.07
        1.49   131.91    .857E+05     119.1         2.03      11.99
        1.68   132.09    .104E+06     157.8         2.22      10.96
        1.86   132.28    .122E+06     201.6         2.41      10.11
        2.05   132.47    .141E+06     250.1         2.59       9.41
        2.23   132.65    .160E+06     303.1         2.76       8.82
        2.42   132.84    .180E+06     360.6         2.93       8.32
        2.61   133.02    .200E+06     422.5         3.08       7.90
        2.79   133.21    .221E+06     488.7         3.24       7.53
        2.98   133.40    .242E+06     552.2         3.34       7.29
        3.16   133.58    .264E+06     613.6         3.40       7.17
        3.35   133.77    .288E+06     658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    36.74    6.25  49.40      0.87      1.57
   OUTFLOW: ID= 1 ( 60350)  707.75    32.16    6.50  49.39      0.81      1.51


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.03   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.113 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.978
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.223 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.993
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.67   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.340

     PEAK FLOW       (cms)=   0.253 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  41.001
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.67   0.253     6.17    41.00
      + ID2= 2 (******):     2.22   0.223     6.08    40.99
        ================================================
        ID = 3 (******):     4.89   0.475     6.17    41.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       1.00     1.00     0.00     0.00     0.00     2.00
       2.00     2.00     0.00     0.00     0.00     4.00
      10.00    10.00     0.00     0.00     0.00    20.00

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   4.89      0.48      6.17   41.00
     ================================================
     ID= 2  (   2)    :   2.44      0.24      6.17   41.00
     ID= 3  (   2)    :   2.44      0.24      6.17   41.00
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.03   0.113     6.08    40.98
      + ID2= 2 (******):     2.44   0.238     6.17    41.00
        ================================================
        ID = 3 (******):     3.48   0.346     6.08    40.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.15   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.480

     PEAK FLOW       (cms)=   0.368 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  41.006
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.039 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  40.709
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.561

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.15   0.368     6.17    41.01
      + ID2= 2 (******):     0.26   0.039     6.00    40.71
        ================================================
        ID = 3 (******):     4.41   0.391     6.17    40.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.41   0.391     6.17    40.99
      + ID2= 2 (******):     3.48   0.346     6.08    40.99
        ================================================
        ID = 1 (******):     7.89   0.736     6.17    40.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.78   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.199

     PEAK FLOW       (cms)=   0.112 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  40.780
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.562

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.14   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.292

     PEAK FLOW       (cms)=   0.211 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  40.996
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.67   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.122

     PEAK FLOW       (cms)=   0.080 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.952
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.47   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.170

     PEAK FLOW       (cms)=   0.130 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  41.006
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.67   0.080     6.08    40.95
      + ID2= 2 (******):     2.14   0.211     6.17    41.00
        ================================================
        ID = 3 (******):     2.81   0.288     6.08    40.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     2.81   0.288     6.08    40.99
      + ID2= 2 (******):     0.78   0.112     6.00    40.78
        ================================================
        ID = 1 (******):     3.59   0.389     6.08    40.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     3.59   0.389     6.08    40.94
      + ID2= 2 (******):     1.47   0.130     6.17    41.01
        ================================================
        ID = 3 (******):     5.06   0.510     6.08    40.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     7.89   0.736     6.17    40.99
      + ID2= 2 (******):     5.06   0.510     6.08    40.96
        ================================================
        ID = 3 ( 50360):    12.95   1.231     6.08    40.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ADD HYD  ( 50360)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50360):    12.95   1.231     6.08    40.98
      + ID2= 2 ( 60350):   707.75  32.164     6.50    49.39
        ================================================
        ID = 1 ( 50360):   720.69  32.915     6.42    49.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.30        0.0450
                    6.00         127.39        0.0450
                   12.00         127.46        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04        0.0450
                   72.00         123.15        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  122.98    .246E+03        0.4         0.31      10.02
        0.33  123.21    .251E+04       11.8         0.86       3.57
        0.56  123.45    .538E+04       39.9         1.37       2.25
        0.80  123.68    .842E+04       81.1         1.78       1.73
        1.04  123.92    .116E+05      134.5         2.13       1.44
        1.27  124.16    .150E+05      200.0         2.46       1.25
        1.51  124.39    .185E+05      278.3         2.78       1.11
        1.74  124.63    .220E+05      367.4         3.08       1.00
        1.98  124.86    .257E+05      466.7         3.35       0.92
        2.22  125.10    .294E+05      576.1         3.61       0.85
        2.45  125.34    .332E+05      695.4         3.86       0.80
        2.69  125.57    .371E+05      824.8         4.10       0.75
        2.92  125.81    .410E+05      963.8         4.33       0.71
        3.16  126.04    .451E+05     1112.3         4.55       0.68
        3.39  126.28    .492E+05     1270.1         4.76       0.65
        3.63  126.51    .534E+05     1437.3         4.97       0.62
        3.87  126.75    .576E+05     1613.7         5.16       0.60
        4.10  126.99    .620E+05     1791.1         5.33       0.58
        4.34  127.22    .665E+05     1970.4         5.47       0.56

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)  720.69    32.92    6.42  49.24      0.51      1.19
   OUTFLOW: ID= 1 ( 60390)  720.69    33.15    6.50  49.24      0.51      1.20


--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   2.361 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  37.608
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.519

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   2.361     6.08    37.61
      + ID2= 2 ( 60390):   720.69  33.155     6.50    49.24
        ================================================
        ID = 3 ( 50390):   741.24  33.957     6.50    48.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83          6.10
     Dep. Storage     (mm)=       2.00          6.08
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     345.74         42.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      95.56         96.41
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.28 (ii)    13.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                    *TOTALS*
     PEAK FLOW       (cms)=       2.40          0.99          3.260 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      70.52         41.93          56.89
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.58           0.78


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.70        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04    0.0450 /0.0350  Main Channel
                   72.00         122.86        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  122.98    .275E+03        0.7         0.35       6.78
        0.36  123.21    .218E+04       14.7         0.95       2.47
        0.59  123.45    .437E+04       44.6         1.44       1.63
        0.83  123.68    .670E+04       87.2         1.84       1.28
        1.06  123.92    .916E+04      141.6         2.19       1.08
        1.30  124.16    .117E+05      208.1         2.51       0.94
        1.54  124.39    .144E+05      287.0         2.82       0.84
        1.77  124.63    .171E+05      376.7         3.11       0.76
        2.01  124.86    .199E+05      476.5         3.38       0.70
        2.24  125.10    .228E+05      586.1         3.64       0.65
        2.48  125.33    .257E+05      705.6         3.88       0.61
        2.71  125.57    .287E+05      835.1         4.12       0.57
        2.95  125.80    .317E+05      974.0         4.35       0.54
        3.19  126.04    .348E+05     1122.3         4.56       0.52
        3.42  126.28    .379E+05     1279.8         4.77       0.49
        3.66  126.51    .411E+05     1446.6         4.97       0.47
        3.89  126.75    .444E+05     1622.6         5.17       0.46
        4.13  126.98    .477E+05     1786.6         5.29       0.45
        4.36  127.22    .513E+05     1942.9         5.36       0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     3.26    6.00  56.89      0.17      0.39
   OUTFLOW: ID= 1 ( 60370)   17.93     2.67    6.08  56.89      0.16      0.38


--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   741.24  33.957     6.50    48.92
      + ID2= 2 ( 60370):    17.93   2.669     6.08    56.89
        ================================================
        ID = 3 ( 50400):   759.17  34.979     6.42    49.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         125.01        0.0450
                   20.00         123.70        0.0450
                   25.00         123.04        0.0450
                   30.00         120.84        0.0450
                   35.00         119.81    0.0450 /0.0350  Main Channel
                   40.00         119.74        0.0350      Main Channel
                   65.00         120.12        0.0450
                   90.00         120.58        0.0450
                  100.00         125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.07  119.81    .209E+03        0.1         0.27      34.81
        0.35  120.09    .326E+04        4.7         0.83      11.50
        0.62  120.36    .916E+04       21.3         1.34       7.16
        0.90  120.63    .176E+05       51.5         1.68       5.69
        1.17  120.91    .270E+05       96.6         2.05       4.67
        1.44  121.18    .367E+05      153.8         2.41       3.98
        1.72  121.46    .466E+05      222.1         2.74       3.50
        1.99  121.73    .567E+05      300.7         3.05       3.14
        2.26  122.00    .669E+05      389.1         3.34       2.87
        2.54  122.28    .774E+05      487.1         3.62       2.65
        2.81  122.55    .880E+05      594.2         3.88       2.47
        3.09  122.82    .988E+05      710.4         4.13       2.32
        3.36  123.10    .110E+06      834.4         4.36       2.20
        3.63  123.37    .121E+06      964.4         4.57       2.10
        3.91  123.65    .133E+06     1104.4         4.76       2.01
        4.18  123.92    .145E+06     1250.0         4.93       1.94
        4.45  124.19    .159E+06     1406.7         5.09       1.88
        4.73  124.47    .172E+06     1575.5         5.25       1.82
        5.00  124.74    .187E+06     1756.1         5.39       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  759.17    34.98    6.42  49.11      0.75      1.47
   OUTFLOW: ID= 1 ( 60400)  759.17    34.24    6.58  49.11      0.74      1.46


--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area     (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26          5.65
     Dep. Storage     (mm)=       2.00          9.48
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     229.75        574.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=      95.56         20.00
                   over (min)        5.00        105.00
     Storage Coeff.  (min)=       4.54 (ii)   101.79 (ii)
     Unit Hyd. Tpeak (min)=       5.00        105.00
     Unit Hyd. peak  (cms)=       0.23          0.01
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.51          0.13          0.529 (iii)
     TIME TO PEAK    (hrs)=       6.00          7.67           6.00
     RUNOFF VOLUME    (mm)=      70.52         30.89          40.82
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.43           0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40410):     7.92   0.529     6.00    40.82
      + ID2= 2 ( 60400):   759.17  34.243     6.58    49.11
        ================================================
        ID = 3 ( 50410):   767.09  34.344     6.50    49.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.217 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.972
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565
```

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     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.066 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.938
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.118 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.963
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   6.75   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.37

     Unit Hyd Qpeak  (cms)=   0.697

     PEAK FLOW       (cms)=   0.551 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  41.010
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.566

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     6.75   0.551     6.25    41.01
      + ID2= 2 (******):     1.01   0.118     6.08    40.96
        ================================================
        ID = 3 (******):     7.76   0.649     6.17    41.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.224 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.989
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.169

     PEAK FLOW       (cms)=   0.122 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  40.996
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.24   0.122     6.17    41.00
      + ID2= 2 (******):     2.16   0.224     6.08    40.99
        ================================================
        ID = 3 (******):     3.40   0.344     6.08    40.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  1 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     3.40   0.344     6.08    40.99
      + ID2= 2 (******):     7.76   0.649     6.17    41.00
        ================================================
        ID = 1 (******):    11.16   0.991     6.17    41.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.68   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.254 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  41.001
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.087 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.938
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.077 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.899
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.61   0.077     6.08    40.90
      + ID2= 2 (******):     2.44   0.238     6.17    41.00
        ================================================
        ID = 3 (******):     3.06   0.310     6.08    40.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.95   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.158

     PEAK FLOW       (cms)=   0.108 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.971
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.137 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.984
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.28   0.137     6.08    40.98
      + ID2= 2 (******):     0.95   0.108     6.08    40.97
        ================================================
        ID = 3 (******):     2.23   0.244     6.08    40.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     2.23   0.244     6.08    40.98
      + ID2= 2 (******):     0.71   0.087     6.08    40.94
        ================================================
        ID = 1 (******):     2.94   0.331     6.08    40.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.94   0.331     6.08    40.97
      + ID2= 2 (******):     1.92   0.217     6.08    40.97
        ================================================
        ID = 3 (******):     4.86   0.548     6.08    40.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.86   0.548     6.08    40.97
      + ID2= 2 (******):     0.54   0.066     6.08    40.94
        ================================================
        ID = 1 (******):     5.40   0.614     6.08    40.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     5.40   0.614     6.08    40.97
      + ID2= 2 (******):     2.68   0.254     6.17    41.00
        ================================================
        ID = 3 (******):     8.08   0.858     6.08    40.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     8.08   0.858     6.08    40.98
      + ID2= 2 (******):     3.06   0.310     6.08    40.98
        ================================================
        ID = 1 (******):    11.13   1.168     6.08    40.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    11.13   1.168     6.08    40.98
      + ID2= 2 (******):    11.16   0.991     6.17    41.00
        ================================================
        ID = 3 (******):    22.30   2.116     6.08    40.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
```

```
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.197

      PEAK FLOW       (cms)=   0.136 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  40.978
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.174

      PEAK FLOW       (cms)=   0.119 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  40.971
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  18.31   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.457

      PEAK FLOW       (cms)=   1.242 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  41.014
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.566

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    1.05   0.119     6.08    40.97
      + ID2= 2 (******):   18.31   1.242     6.33    41.01
        ====================================================
        ID = 3 (******):   19.36   1.317     6.33    41.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):   19.36   1.317     6.33    41.01
      + ID2= 2 (******):    1.24   0.136     6.08    40.98
        ====================================================
        ID = 1 (******):   20.60   1.408     6.25    41.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):   22.30   2.116     6.08    40.99
      + ID2= 2 (******):   20.60   1.408     6.25    41.01
        ====================================================
        ID = 3 (******):   42.90   3.454     6.17    41.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area    (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
 --------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.95        46.62
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       1.90         1.90
     Length            (m)=     671.17        89.00
     Mannings n           =      0.015        0.240

     Max.Eff.Inten.(mm/hr)=      95.56        61.31
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       7.33 (ii)   21.07 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.17         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       4.10         3.78          6.301 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=      70.52        35.61          44.33
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.49           0.61

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):    67.57   6.301     6.00    44.33
      + ID2= 2 (******):    42.90   3.454     6.17    41.00
        ====================================================
        ID = 3 (******):   110.47   9.026     6.00    43.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):   767.09  34.344     6.50    49.02
      + ID2= 2 (******):   110.47   9.026     6.00    43.04
        ====================================================
        ID = 3 ( 50420):   877.56  40.323     6.50    48.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        121.79        0.0450
                  12.00        116.08        0.0450
                  40.00        115.59    0.0450 /0.0350  Main Channel
                  44.00        114.89        0.0350      Main Channel
                  48.00        114.52        0.0350      Main Channel
                  52.00        115.72    0.0350 /0.0450  Main Channel
                  56.00        115.93        0.0450
                  60.00        117.24        0.0450
                  64.00        119.04        0.0450
                  68.00        120.69        0.0450
                  72.00        121.01        0.0450
                  74.00        121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36  114.88    .645E+03        0.7         0.83      14.38
        0.71  115.23    .236E+04        4.6         1.41       8.47
        1.07  115.59    .489E+04       12.6         1.84       6.48
        1.44  115.96    .112E+05       30.9         1.97       6.04
        1.80  116.33    .227E+05       69.1         2.17       5.49
        2.17  116.70    .351E+05      125.6         2.56       4.65
        2.54  117.06    .479E+05      197.5         2.95       4.04
        2.91  117.43    .612E+05      283.9         3.32       3.59
        3.28  117.80    .749E+05      384.1         3.66       3.25
        3.65  118.17    .891E+05      497.4         3.99       2.99
        4.02  118.54    .104E+06      623.5         4.30       2.77
        4.39  118.91    .119E+06      762.2         4.59       2.60
        4.76  119.28    .134E+06      913.1         4.87       2.45
        5.13  119.65    .150E+06     1076.2         5.13       2.32
        5.49  120.02    .166E+06     1251.7         5.38       2.21
        5.86  120.39    .183E+06     1439.5         5.62       2.12
        6.23  120.75    .200E+06     1634.3         5.84       2.04
        6.60  121.12    .219E+06     1831.3         5.99       1.99
        6.97  121.49    .238E+06     2058.5         6.20       1.92

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420)  877.56    40.32    6.50  48.27      1.53      2.02
   OUTFLOW: ID= 1 ( 60420)  877.56    39.56    6.58  48.27      1.52      2.01


--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
 --------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.41        11.03
     Dep. Storage     (mm)=       2.00         7.80
     Average Slope     (%)=       3.50         3.50
     Length            (m)=     465.00       102.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=      95.56        45.29
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       4.90 (ii)   21.55 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.22         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       5.34         0.80          5.802 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=      70.52        33.22          57.09
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.46           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   5.802     6.00    57.09
      + ID2= 2 ( 60420):   877.56  39.557     6.58    48.27
        ====================================================
        ID = 3 ( 50430):   909.99  40.571     6.58    48.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        116.29        0.0450
                  20.00        114.05        0.0450
                  25.00        110.83        0.0450
                  30.00        109.36        0.0450
                  35.00        108.23    0.0450 /0.0350  Main Channel
                  40.00        107.52        0.0350      Main Channel
                  45.00        108.00    0.0350 /0.0450  Main Channel
                  50.00        107.84        0.0450
                  55.00        108.21        0.0450
                  60.00        108.95        0.0450
                  65.00        109.35        0.0450
                  70.00        109.41        0.0450
                  75.00        109.48        0.0450
                  80.00        109.77        0.0450
                  85.00        112.20        0.0450
                  90.00        115.48        0.0450
                 100.00        116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24  107.76    .285E+03        0.4         0.74      12.74
        0.48  108.00    .146E+04        2.6         1.01       9.32
        0.97  108.49    .695E+04       23.3         1.90       4.97
        1.46  108.97    .141E+05       64.5         2.60       3.63
        1.94  109.46    .233E+05      116.9         2.84       3.33
        2.43  109.95    .371E+05      214.6         3.28       2.88
        2.92  110.44    .519E+05      350.2         3.83       2.47
        3.41  110.92    .675E+05      515.9         4.34       2.18
        3.89  111.41    .836E+05      711.3         4.82       1.96
        4.38  111.90    .100E+06      933.4         5.28       1.79
        4.87  112.39    .117E+06     1182.4         5.71       1.65
        5.35  112.87    .135E+06     1458.0         6.13       1.54
        5.84  113.36    .153E+06     1758.3         6.52       1.45
        6.33  113.85    .171E+06     2082.9         6.90       1.37
        6.82  114.34    .190E+06     2410.6         7.19       1.31
        7.30  114.82    .210E+06     2758.9         7.43       1.27
        7.79  115.31    .232E+06     3143.1         7.68       1.23
        8.28  115.80    .255E+06     3473.3         7.71       1.23
        8.77  116.29    .282E+06     3812.4         7.67       1.23

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  909.99    40.57    6.58  48.58      1.17      2.14
   OUTFLOW: ID= 1 ( 60430)  909.99    40.34    6.58  48.58      1.17      2.14


--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
 --------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70        19.42
     Dep. Storage     (mm)=       2.00         6.60
     Average Slope     (%)=       2.50         2.50
     Length            (m)=     617.06        45.00
     Mannings n           =      0.015        0.290
```

```
      Max.Eff.Inten.(mm/hr)=      95.56        46.38
                over (min)        5.00        20.00
      Storage Coeff.  (min)=      6.42 (ii)   16.95 (ii)
      Unit Hyd. Tpeak (min)=      5.00        20.00
      Unit Hyd. peak  (cms)=      0.18         0.06
                                                        *TOTALS*
      PEAK FLOW       (cms)=      9.22         1.36        10.154 (iii)
      TIME TO PEAK    (hrs)=      6.00         6.17         6.00
      RUNOFF VOLUME    (mm)=     70.52        29.03        56.00
      TOTAL RAINFALL   (mm)=     72.52        72.52        72.52
      RUNOFF COEFFICIENT   =      0.97         0.40         0.77

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  74.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40440):    57.11  10.154     6.00    56.00
      + ID2= 2 ( 60430):   909.99  40.339     6.58    48.58
        ================================================
        ID = 3 ( 50440):   967.10  42.005     6.58    49.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         104.01        0.0450
                   10.00         103.90        0.0450
                   20.00         103.74        0.0450
                   30.00         103.66        0.0450
                   40.00         103.60        0.0450
                   50.00         102.52        0.0450
                   60.00         101.16        0.0450
                   70.00         100.60        0.0450
                   80.00         100.17        0.0450
                   90.00          99.85        0.0450
                  100.00          97.89        0.0350      Main Channel
                  110.00          97.62        0.0350      Main Channel
                  120.00          99.12        0.0450
                  130.00          99.16        0.0450
                  140.00          99.36        0.0450
                  150.00          99.66        0.0450
                  160.00          99.68        0.0450
                  180.00          99.76        0.0450
                  190.00         104.10        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.27   97.89    .102E+04        1.2         0.77      13.74
         0.60   98.21    .381E+04        9.4         1.56       6.74
         0.92   98.53    .738E+04       24.3         2.08       5.05
         1.24   98.86    .117E+05       46.2         2.50       4.22
         1.56   99.18    .171E+05       76.6         2.84       3.71
         1.89   99.50    .264E+05      124.5         2.98       3.53
         2.21   99.82    .403E+05      189.1         2.96       3.56
         2.53  100.15    .597E+05      286.1         3.03       3.48
         2.85  100.47    .809E+05      417.7         3.26       3.23
         3.17  100.79    .104E+06      580.2         3.53       2.98
         3.50  101.11    .128E+06      771.7         3.81       2.77
         3.82  101.44    .153E+06      996.3         4.10       2.57
         4.14  101.76    .179E+06     1248.4         4.40       2.40
         4.46  102.08    .206E+06     1526.4         4.68       2.25
         4.79  102.40    .233E+06     1829.8         4.96       2.13
         5.11  102.73    .261E+06     2156.4         5.22       2.02
         5.43  103.05    .290E+06     2507.0         5.47       1.93
         5.75  103.37    .319E+06     2882.7         5.71       1.85
         6.08  103.69    .350E+06     3194.7         5.77       1.83

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  967.10    42.00    6.58  49.02      1.18      2.40
   OUTFLOW: ID= 1 ( 60440)  967.10    41.84    6.67  49.02      1.17      2.39


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37        17.02
     Dep. Storage     (mm)=       2.00         6.90
     Average Slope     (%)=       0.80         0.80
     Length            (m)=     450.16       150.00
     Mannings n           =      0.015        0.300

     Max.Eff.Inten.(mm/hr)=      95.56        26.11
               over (min)        5.00        50.00
     Storage Coeff.  (min)=      7.47 (ii)   46.67 (ii)
     Unit Hyd. Tpeak (min)=      5.00        50.00
     Unit Hyd. peak  (cms)=      0.17         0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=      3.01         0.69         3.211 (iii)
     TIME TO PEAK    (hrs)=      6.00         6.67         6.00
     RUNOFF VOLUME    (mm)=     70.52        31.54        47.52
     TOTAL RAINFALL   (mm)=     72.52        72.52        72.52
     RUNOFF COEFFICIENT   =      0.97         0.43         0.66

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40450):    30.40   3.211     6.00    47.52
      + ID2= 2 ( 60440):   967.10  41.844     6.67    49.02
        ================================================
        ID = 3 ( 50450):   997.50  42.811     6.67    48.97

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         97.16        0.0450
                    3.00         96.00        0.0450
                    6.00         95.32        0.0450
                    9.00         94.64        0.0450
                   12.00         94.43        0.0450
                   15.00         94.29        0.0450
                   18.00         94.10        0.0350      Main Channel
                   21.00         94.02        0.0350      Main Channel
                   24.00         93.70        0.0350      Main Channel
                   27.00         94.22   0.0350 /0.0450   Main Channel
                   30.00         94.90        0.0450
                   32.00         95.30        0.0450
                   34.00         95.78        0.0450
                   36.00         96.25        0.0450
                   38.00         96.60        0.0450
                   48.00         97.14        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.13   93.83    .942E+02        0.1         0.39      30.45
         0.27   93.96    .377E+03        0.3         0.62      19.18
         0.40   94.09    .911E+03        0.9         0.69      17.28
         0.59   94.29    .230E+04        3.4         1.06      11.15
         0.78   94.48    .428E+04        7.9         1.32       8.98
         0.97   94.67    .679E+04       14.6         1.53       7.74
         1.16   94.86    .963E+04       23.7         1.75       6.77
         1.35   95.05    .127E+05       34.9         1.96       6.07
         1.54   95.24    .160E+05       48.1         2.14       5.54
         1.73   95.43    .196E+05       63.6         2.31       5.13
         1.92   95.62    .233E+05       81.2         2.48       4.79
         2.11   95.81    .273E+05      101.0         2.63       4.51
         2.30   96.00    .315E+05      123.0         2.78       4.27
         2.49   96.19    .360E+05      147.8         2.93       4.06
         2.68   96.38    .406E+05      174.6         3.07       3.87
         2.87   96.57    .454E+05      203.7         3.20       3.71
         3.06   96.76    .505E+05      232.7         3.28       3.62
         3.25   96.95    .562E+05      264.9         3.36       3.54
         3.44   97.14    .624E+05      300.8         3.43       3.46

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450)  997.50    42.81    6.67  48.97      1.46      2.06
   OUTFLOW: ID= 1 ( 60450)  997.50    42.39    6.75  48.97      1.46      2.05


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36         7.04
     Dep. Storage     (mm)=       2.00         6.68
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     386.43        40.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      95.56        86.71
               over (min)        5.00        15.00
     Storage Coeff.  (min)=      4.91 (ii)   12.48 (ii)
     Unit Hyd. Tpeak (min)=      5.00        15.00
     Unit Hyd. peak  (cms)=      0.22         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=      3.05         1.05         3.959 (iii)
     TIME TO PEAK    (hrs)=      6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=     70.52        35.02        53.78
     TOTAL RAINFALL   (mm)=     72.52        72.52        72.52
     RUNOFF COEFFICIENT   =      0.97         0.48         0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40460):    22.40   3.959     6.00    53.78
      + ID2= 2 ( 60450):   997.50  42.386     6.75    48.97
        ================================================
        ID = 3 ( 50460):  1019.90  42.823     6.75    49.08

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         91.61        0.0450
                    3.00         91.57        0.0450
                    6.00         91.15        0.0450
                    9.00         90.70        0.0450
                   12.00         89.72        0.0450
                   15.00         88.86        0.0450
                   18.00         88.38    0.0450 /0.0350  Main Channel
                   21.00         87.96        0.0350      Main Channel
                   24.00         88.18    0.0350 /0.0450  Main Channel
                   26.00         88.19        0.0450
                   28.00         88.30        0.0450
                   30.00         90.32        0.0450
                   32.00         90.49        0.0450
                   34.00         90.80        0.0450
                   36.00         90.85        0.0450
                   38.00         90.97        0.0450
                   40.00         91.15        0.0450
                   42.00         91.29        0.0450
                   44.00         91.40        0.0450
                   46.00         91.56        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.11   88.07    .589E+02        0.0         0.34      23.89
         0.21   88.18    .235E+03        0.3         0.54      15.05
         0.41   88.38    .106E+04        1.8         0.85       9.64
         0.61   88.57    .211E+04        5.3         1.22       6.69
         0.81   88.77    .330E+04       10.2         1.51       5.40
         1.01   88.97    .462E+04       16.6         1.76       4.63
         1.21   89.17    .603E+04       24.5         1.99       4.10
         1.41   89.37    .753E+04       33.8         2.19       3.72
         1.61   89.57    .912E+04       44.4         2.38       3.42
         1.81   89.77    .108E+05       56.4         2.56       3.19
         2.00   89.97    .125E+05       69.9         2.72       2.99
         2.20   90.17    .144E+05       84.7         2.88       2.83
         2.40   90.37    .163E+05       99.8         3.00       2.72
         2.60   90.56    .184E+05      114.7         3.04       2.68
         2.80   90.76    .208E+05      132.8         3.13       2.61
         3.00   90.96    .235E+05      148.4         3.09       2.64
         3.20   91.16    .266E+05      170.7         3.13       2.60
         3.40   91.36    .302E+05      194.9         3.16       2.58
         3.60   91.56    .342E+05      223.5         3.20       2.55

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460) 1019.90    42.82    6.75  49.08      1.58      2.35
   OUTFLOW: ID= 1 ( 60460) 1019.90    42.86    6.75  49.08      1.58      2.35


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53        30.66
     Dep. Storage     (mm)=       2.00         5.90
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     775.42        40.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      95.56        81.51
```

```
                over (min)       10.00        20.00
     Storage Coeff.  (min)=       8.76 (ii)   17.88 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.12         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=      10.60         3.52        13.078 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      70.52        36.54        54.89
     TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
     RUNOFF COEFFICIENT   =       0.97         0.50         0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40470):    90.19  13.078     6.00    54.89
     + ID2= 2 ( 60460):  1019.90  42.860     6.75    49.08
       ================================================
       ID = 3 ( 50470):  1110.09  45.329     6.75    49.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         89.19        0.0450
                   2.00         88.89        0.0450
                   4.00         88.54        0.0450
                   6.00         88.31        0.0450
                   8.00         88.14        0.0450
                  10.00         88.02        0.0450
                  12.00         87.99        0.0450
                  14.00         87.90        0.0450
                  16.00         87.84        0.0450
                  19.00         87.55        0.0450
                  22.00         86.85        0.0450
                  25.00         86.23        0.0350      Main Channel
                  28.00         86.23        0.0350      Main Channel
                  31.00         86.60        0.0450
                  34.00         87.49        0.0450
                  37.00         88.15        0.0450
                  41.00         88.21        0.0450
                  45.00         88.29        0.0450
                  48.00         88.36        0.0450
                  50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1110.09    45.33    6.75  49.55      1.94      1.72
   OUTFLOW: ID= 1 ( 60470) 1110.09    44.74    6.83  49.55      1.93      1.72

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--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82         13.61
     Dep. Storage     (mm)=       2.00          5.80
     Average Slope     (%)=       1.90          1.90
     Length            (m)=     613.35         40.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=      95.56        120.89
               over (min)        5.00         15.00
     Storage Coeff.  (min)=       6.94 (ii)   13.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.17         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       8.16         2.80        10.616 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      70.52        43.82        59.57
     TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
     RUNOFF COEFFICIENT   =       0.97         0.60         0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40480):    56.43  10.616     6.00    59.57
     + ID2= 2 ( 60470):  1110.09  44.744     6.83    49.55
       ================================================
       ID = 3 ( 50480):  1166.52  45.975     6.75    50.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         86.90        0.0450
                   2.00         86.76        0.0450
                   4.00         85.96        0.0450
                   6.00         85.44        0.0450
                   8.00         84.83        0.0450
                  10.00         84.50        0.0450
                  12.00         84.15        0.0450
                  14.00         83.85        0.0350      Main Channel
                  16.00         83.86        0.0350      Main Channel
                  18.00         83.99    0.0350 /0.0450  Main Channel
                  20.00         84.27        0.0450
                  22.00         84.55        0.0450
                  24.00         84.88        0.0450
                  26.00         85.37        0.0450
                  27.00         85.68        0.0450
                  28.00         85.91        0.0450
                  29.00         86.08        0.0450
                  30.00         86.21        0.0450
                  31.00         86.29        0.0450
                  34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03        0.3         0.48      10.34
        0.32   84.17    .460E+03        1.2         0.77       6.41
        0.48   84.33    .855E+03        2.8         0.98       5.07
        0.64   84.48    .135E+04        5.2         1.14       4.35
        0.80   84.64    .193E+04        8.3         1.28       3.88
        0.95   84.80    .261E+04       12.3         1.40       3.53
        1.11   84.96    .337E+04       17.4         1.53       3.23
        1.27   85.12    .419E+04       23.5         1.66       2.97
        1.43   85.28    .506E+04       30.5         1.79       2.77
        1.59   85.44    .599E+04       38.5         1.90       2.60
        1.75   85.60    .697E+04       47.3         2.01       2.46
        1.91   85.76    .801E+04       57.1         2.12       2.34
        2.07   85.92    .911E+04       67.8         2.21       2.24
        2.23   86.07    .103E+05       79.5         2.30       2.15
        2.39   86.23    .115E+05       91.9         2.37       2.09
        2.54   86.39    .128E+05      105.7         2.45       2.02
        2.70   86.55    .142E+05      121.2         2.53       1.95
        2.86   86.71    .156E+05      138.0         2.62       1.89
        3.02   86.87    .171E+05      153.0         2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1166.52    45.97    6.75  50.03      1.72      2.00
   OUTFLOW: ID= 1 ( 60480) 1166.52    45.94    6.83  50.03      1.72      1.99

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--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60          4.16
     Dep. Storage     (mm)=       2.00          6.22
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     334.28         53.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=      95.56        110.18
               over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.29 (ii)   14.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.59         0.75         3.243 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      70.52        42.30        59.35
     TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
     RUNOFF COEFFICIENT   =       0.97         0.58         0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40490):    16.76   3.243     6.00    59.35
     + ID2= 2 ( 60480):  1166.52  45.945     6.83    50.03
       ================================================
       ID = 3 ( 50490):  1183.28  46.274     6.83    50.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         85.84        0.0450
                   6.00         84.32        0.0450
                  12.00         84.21        0.0450
                  18.00         84.12        0.0450
                  24.00         84.08        0.0450
                  30.00         84.10        0.0450
                  36.00         84.03        0.0450
                  42.00         83.92        0.0450
                  48.00         83.88        0.0450
                  54.00         82.88        0.0350      Main Channel
                  60.00         83.12    0.0350 /0.0450  Main Channel
                  64.00         83.65        0.0450
                  68.00         83.60        0.0450
                  72.00         83.67        0.0450
                  76.00         83.70        0.0450
                  80.00         83.82        0.0450
                  84.00         83.90        0.0450
                  88.00         84.05        0.0450
                  92.00         84.16        0.0450
                 100.00         85.83        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03        0.1         0.32      46.08
        0.31   83.19    .129E+04        0.8         0.57      26.14
        0.47   83.35    .259E+04        2.3         0.79      18.75
        0.62   83.50    .418E+04        4.5         0.96      15.43
        0.78   83.66    .626E+04        7.3         1.04      14.28
        0.93   83.81    .101E+05       11.9         1.05      14.10
        1.09   83.97    .153E+05       17.6         1.02      14.55
        1.24   84.13    .231E+05       26.2         1.00      14.73
        1.40   84.28    .341E+05       41.2         1.07      13.79
        1.55   84.44    .460E+05       61.7         1.19      12.44
        1.71   84.59    .582E+05       86.6         1.32      11.21
        1.86   84.75    .706E+05      115.2         1.45      10.21
        2.02   84.90    .831E+05      147.5         1.57       9.39
        2.17   85.06    .959E+05      183.2         1.70       8.72
        2.33   85.21    .109E+06      222.2         1.81       8.16
        2.48   85.37    .122E+06      264.5         1.93       7.68
        2.64   85.52    .135E+06      310.0         2.03       7.27
        2.79   85.68    .149E+06      358.5         2.14       6.91
        2.95   85.83    .162E+06      410.1         2.24       6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1183.28    46.27    6.83  50.17      1.43      1.10
   OUTFLOW: ID= 1 ( 60490) 1183.28    45.37    6.92  50.17      1.43      1.09

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92          4.72
     Dep. Storage     (mm)=       2.00          5.43
     Average Slope     (%)=       2.10          2.10
     Length            (m)=     370.92         40.00
```

```
      Mannings n           =      0.015        0.260
      Max.Eff.Inten.(mm/hr)=      95.56       120.18
                   over (min)        5.00        10.00
      Storage Coeff.  (min)=       4.98 (ii)    9.87 (ii)
      Unit Hyd. Tpeak (min)=        5.00        10.00
      Unit Hyd. peak  (cms)=        0.22         0.11
                                                          *TOTALS*
      PEAK FLOW       (cms)=        3.25         1.15          4.402 (iii)
      TIME TO PEAK    (hrs)=        6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=       70.52        43.79          60.16
      TOTAL RAINFALL   (mm)=       72.52        72.52          72.52
      RUNOFF COEFFICIENT   =        0.97         0.60           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  78.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40810):    20.64    4.402     6.00    60.16
      + ID2= 2 ( 60490):  1183.28   45.375     6.92    50.17
        ================================================
        ID = 3 ( 50810):  1203.92   45.706     6.92    50.34

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.52         6.81
      Dep. Storage     (mm)=       2.00         9.76
      Average Slope     (%)=       3.20         3.20
      Length            (m)=     249.31        47.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      95.56        55.26
                   over (min)        5.00        15.00
      Storage Coeff.  (min)=       3.46 (ii)   13.93 (ii)
      Unit Hyd. Tpeak (min)=        5.00        15.00
      Unit Hyd. peak  (cms)=        0.26         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=        0.43         0.65          0.978 (iii)
      TIME TO PEAK    (hrs)=        6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=       70.52        30.91          37.83
      TOTAL RAINFALL   (mm)=       72.52        72.52          72.52
      RUNOFF COEFFICIENT   =        0.97         0.43           0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  76.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40500):     9.32    0.978     6.00    37.83
      + ID2= 2 ( 50810):  1203.92   45.706     6.92    50.34
        ================================================
        ID = 3 ( 50500):  1213.24   45.858     6.92    50.24

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

      Unit Hyd Qpeak  (cms)=   0.448

      PEAK FLOW       (cms)=   0.343 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  41.006
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

      Unit Hyd Qpeak  (cms)=   0.107

      PEAK FLOW       (cms)=   0.062 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  40.832
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.563

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.154

      PEAK FLOW       (cms)=   0.105 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  40.971
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.45         0.00
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.40         1.00
      Length            (m)=      48.30         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      95.56        67.47
                   over (min)        5.00         5.00
      Storage Coeff.  (min)=       2.21 (ii)    2.21 (ii)
      Unit Hyd. Tpeak (min)=        5.00         5.00
      Unit Hyd. peak  (cms)=        0.30         0.30
                                                          *TOTALS*
      PEAK FLOW       (cms)=        0.12         0.00          0.119 (iii)
      TIME TO PEAK    (hrs)=        6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=       70.52        41.02          70.22
      TOTAL RAINFALL   (mm)=       72.52        72.52          72.52
      RUNOFF COEFFICIENT   =        0.97         0.57           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      13.25        13.25
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       2.00         2.00
      Length            (m)=     420.00        30.00
      Mannings n           =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=      95.56       106.65
                   over (min)        5.00        10.00
      Storage Coeff.  (min)=       5.00 (ii)    6.86 (ii)
      Unit Hyd. Tpeak (min)=        5.00        10.00
      Unit Hyd. peak  (cms)=        0.21         0.14
                                                          *TOTALS*
      PEAK FLOW       (cms)=        2.04         3.28          5.322 (iii)
      TIME TO PEAK    (hrs)=        6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=       70.52        47.42          54.35
      TOTAL RAINFALL   (mm)=       72.52        72.52          72.52
      RUNOFF COEFFICIENT   =        0.97         0.65           0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |    (cms)     (ha.m.)
                           0.0000      0.0000   |    1.8600      0.9862
                           0.0560      0.3250   |    2.1000      1.0580
                           0.2600      0.4718   |    2.2000      1.2000
                           0.7400      0.6512   |   10.0000      1.2500
                           1.4100      0.8427   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK      R.V.
                                (ha)     (cms)     (hrs)      (mm)
   INFLOW : ID= 2 (******)     26.500     5.322      6.00      54.35
   OUTFLOW: ID= 1 (******)     26.500     1.240      6.33      54.29
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 23.30
                  TIME SHIFT OF PEAK FLOW          (min)= 20.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7954

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  --------------------------
  | Junction Command(30651004) |
  --------------------------

                               AREA     QPEAK   TPEAK     R.V.
                               (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651002)    0.00      0.00     0.00      0.00
  OUTFLOW: ID= 2(30651004)    0.00      0.00     0.00      0.00

  ------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    26.50    1.240     6.33    54.29
      + ID2= 2 (******):     0.00    0.000     0.00     0.00
        ================================================
        ID = 3 (******):    26.50    1.240     6.33    54.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.89         0.04
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.40         1.00
      Length            (m)=     115.50         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      95.56        67.47
                   over (min)        5.00         5.00
      Storage Coeff.  (min)=       3.73 (ii)    3.73 (ii)
      Unit Hyd. Tpeak (min)=        5.00         5.00
      Unit Hyd. peak  (cms)=        0.25         0.25
                                                          *TOTALS*
      PEAK FLOW       (cms)=        1.02         0.01          1.028 (iii)
      TIME TO PEAK    (hrs)=        6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=       70.52        41.02          70.22
      TOTAL RAINFALL   (mm)=       72.52        72.52          72.52
      RUNOFF COEFFICIENT   =        0.97         0.57           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.93    0.105     6.08    40.97
      + ID2= 2 (******):     3.93    1.028     6.00    70.22
        ================================================
        ID = 3 (******):     4.86    1.122     6.00    64.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.86    1.122     6.00    64.63
      + ID2= 2 (******):     0.45    0.119     6.00    70.22
        ================================================
        ID = 1 (******):     5.31    1.241     6.00    65.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 ---------------------------------------------------------------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.31   1.241     6.00    65.10
      + ID2= 2 (******):    26.50   1.240     6.33    54.29
        ================================================
        ID = 3 (******):    31.81   1.832     6.00    56.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.45

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   1.039 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  41.014
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.566

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62   1.039     6.33    41.01
      + ID2= 2 (******):    31.81   1.832     6.00    56.10
        ================================================
        ID = 3 (******):    46.43   2.511     6.25    51.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0450
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.05   441.45    .114E+03        0.0          0.27      55.89
        0.11   441.50    .457E+03        0.2          0.43      35.21
        0.16   441.56    .103E+04        0.6          0.57      26.87
        0.22   441.61    .185E+04        1.4          0.67      22.84
        0.27   441.67    .297E+04        2.5          0.77      19.84
        0.33   441.72    .437E+04        4.1          0.87      17.59
        0.38   441.78    .605E+04        6.4          0.96      15.85
        0.44   441.83    .802E+04        9.2          1.05      14.47
        0.49   441.89    .103E+05       12.8          1.14      13.35
        0.55   441.94    .128E+05       17.2          1.23      12.42
        0.60   442.00    .157E+05       22.4          1.31      11.63
        0.66   442.05    .188E+05       28.3          1.38      11.07
        0.71   442.11    .225E+05       36.9          1.50      10.16
        0.78   442.17    .277E+05       48.4          1.60       9.54
        0.84   442.24    .339E+05       61.9          1.67       9.13
        0.91   442.30    .412E+05       77.1          1.71       8.90
        0.97   442.36    .495E+05       94.7          1.75       8.71
        1.03   442.43    .589E+05      114.9          1.79       8.54
        1.10   442.49    .693E+05      137.9          1.82       8.38

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    46.43     2.51    6.25  51.35      0.28      0.77
   OUTFLOW: ID= 1 (******)    46.43     2.19    6.58  51.35      0.26      0.74


 ---------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):     46.43      2.19      6.58   51.35
     ================================================
     ID= 2  (   2)    :    37.74      1.00      6.58   51.35
     ID= 3  (   2)    :     8.69      1.19      6.58   51.35
     ID= 4  (   2)    :     0.00      0.00      0.00    0.00
     ID= 5  (   2)    :     0.00      0.00      0.00    0.00
     ID= 6  (   2)    :     0.00      0.00      0.00    0.00
 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (******)|   Area    (ha)=   0.22   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.030 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  40.831
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.563

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.030     6.00    40.83
      + ID2= 2 (******):     8.69   1.190     6.58    51.35
        ================================================
        ID = 3 (******):     8.91   1.196     6.58    51.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        433.07        0.0450
                   59.66        432.39        0.0450
                   94.25        432.03        0.0450
                  115.71        431.82        0.0450
                  143.84        431.84    0.0450 /0.0350  Main Channel
                  163.59        431.75        0.0350      Main Channel
                  177.84        431.73        0.0350      Main Channel
                  199.51        431.70        0.0350      Main Channel
                  231.74        431.53        0.0350      Main Channel
                  283.71        431.44        0.0350      Main Channel
                  294.09        431.43        0.0350      Main Channel
                  325.65        431.42        0.0350      Main Channel
                  355.24        431.24        0.0350      Main Channel
                  383.70        431.43        0.0350      Main Channel
                  476.17        432.06    0.0350 /0.0450  Main Channel
                  510.88        432.23        0.0450
                  558.61        432.37        0.0450
                  589.84        432.57        0.0450
                  622.97        432.73        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.08   431.32    .108E+03        0.3          0.30       6.68
        0.15   431.39    .434E+03        1.7          0.47       4.21
        0.23   431.47    .119E+04        5.0          0.50       3.99
        0.30   431.54    .252E+04       13.9          0.66       3.02
        0.38   431.62    .417E+04       29.3          0.84       2.37
        0.45   431.69    .604E+04       50.1          0.99       2.01
        0.53   431.77    .828E+04       73.9          1.06       1.87
        0.60   431.84    .109E+05      108.8          1.19       1.67
        0.68   431.92    .142E+05      159.5          1.34       1.48
        0.76   432.01    .176E+05      219.4          1.48       1.34
        0.84   432.09    .213E+05      290.0          1.62       1.22
        0.92   432.17    .252E+05      374.6          1.77       1.12
        1.01   432.25    .293E+05      469.2          1.91       1.04
        1.09   432.33    .338E+05      573.9          2.02       0.98
        1.17   432.41    .386E+05      689.9          2.13       0.93
        1.25   432.49    .435E+05      817.2          2.24       0.89
        1.33   432.57    .487E+05      955.3          2.34       0.85
        1.41   432.65    .541E+05     1103.5          2.43       0.82
        1.49   432.73    .597E+05     1262.7          2.52       0.79

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     8.91     1.20    6.58  51.09      0.12      0.39
   OUTFLOW: ID= 1 (******)     8.91     1.19    6.58  51.09      0.12      0.39


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

 ---------------------------------------------------------------------------
 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.343     6.17    41.01
      + ID2= 2 (******):     0.45   0.062     6.00    40.83
        ================================================
        ID = 3 (******):     4.32   0.387     6.17    40.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.387     6.17    40.99
      + ID2= 2 (******):     8.91   1.188     6.58    51.09
        ================================================
        ID = 1 (******):    13.23   1.409     6.58    47.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        430.79        0.0450
                   23.82        429.79    0.0450 /0.0350  Main Channel
                   44.05        429.11        0.0350      Main Channel
                   70.46        428.15        0.0350      Main Channel
                  112.31        427.60        0.0350      Main Channel
                  150.77        427.27        0.0350      Main Channel
                  179.17        427.15        0.0350      Main Channel
                  214.90        427.16        0.0350      Main Channel
                  261.89        427.25        0.0350      Main Channel
                  317.65        427.56        0.0350      Main Channel
                  382.75        427.99        0.0350      Main Channel
                  394.40        428.11        0.0350      Main Channel
                  432.80        428.07        0.0350      Main Channel
                  432.91        428.07        0.0350      Main Channel
                  462.57        428.15        0.0350      Main Channel
                  522.90        429.79    0.0350 /0.0450  Main Channel
                  585.04        429.90        0.0450
                  731.92        430.62        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.18   427.33    .207E+04       11.5          0.73       2.99
        0.35   427.50    .570E+04       49.9          1.15       1.91
        0.53   427.68    .105E+05      119.2          1.49       1.47
        0.70   427.85    .163E+05      221.8          1.79       1.22
        0.88   428.03    .229E+05      360.8          2.06       1.06
        1.06   428.21    .312E+05      509.7          2.14       1.02
        1.23   428.38    .405E+05      771.0          2.49       0.88
        1.41   428.56    .500E+05     1076.3          2.82       0.77
        1.58   428.73    .598E+05     1423.8          3.12       0.70
        1.76   428.91    .699E+05     1812.5          3.40       0.64
        1.94   429.09    .802E+05     2241.5          3.66       0.60
        2.11   429.26    .907E+05     2709.1          3.91       0.56
        2.29   429.44    .102E+06     3215.8          4.15       0.53
        2.46   429.61    .113E+06     3761.6          4.38       0.50
        2.64   429.79    .124E+06     4346.4          4.59       0.48
        2.85   430.00    .139E+06     5173.9          4.88       0.45
        3.06   430.20    .156E+06     6075.9          5.12       0.43
        3.26   430.41    .173E+06     7054.9          5.33       0.41
        3.47   430.62    .193E+06     8114.3          5.52       0.40

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    13.23     1.41    6.58  47.79      0.02      0.73
   OUTFLOW: ID= 1 (******)    13.23     1.39    6.58  47.79      0.02      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (******)|   Area    (ha)=   0.97   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.110 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.971
     TOTAL RAINFALL   (mm)=  72.519
```

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      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.146

      PEAK FLOW       (cms)=   0.088 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  40.899
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.564

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.088     6.08    40.90
      + ID2= 2 (******):     0.97   0.110     6.08    40.97
        ================================================
        ID = 3 (******):     1.66   0.197     6.08    40.94

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.197     6.08    40.94
      + ID2= 2 (******):    13.23   1.394     6.58    47.79
        ================================================
        ID = 3 (******):    14.89   1.452     6.58    47.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   14.89      1.45      6.58   47.02
      ================================================
      ID= 2  (   2)    :  14.89      1.45      6.58   47.02
      ID= 3  (   2)    :   0.00      0.00      6.58   47.02
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.96         0.25
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.64         0.54
      Length            (m)=      63.89       157.20
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      95.56        67.47
                    over (min)       5.00        10.00
      Storage Coeff.  (min)=       2.27 (ii)    6.26 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.30         0.15
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.25         0.04          0.294 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      70.52        41.02          64.32
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.57           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.32         0.58
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.70         0.60
      Length            (m)=     166.18       124.91
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      95.56        67.47
                    over (min)       5.00        10.00
      Storage Coeff.  (min)=       3.93 (ii)    7.21 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.24         0.14
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.61         0.09          0.695 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      70.52        64.62          64.62
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.57           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.90   0.695     6.00    64.62
      + ID2= 2 (******):     1.21   0.294     6.00    64.32
        ================================================
        ID = 3 (  0043):     4.11   0.989     6.00    64.53

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.85     0.00     0.00     0.00     0.00     0.85
        0.85     1.00     0.00     0.00     0.00     1.85
        0.85   100.00     0.00     0.00     0.00   100.85

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):    4.11      0.99      6.00   64.53
      ================================================
      ID= 2  (   2)    :   4.00      0.85      6.00   64.53
      ID= 3  (   2)    :   0.11      0.14      6.00   64.53
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000     6.58    47.02
      + ID2= 2 (******):     4.00   0.847     6.00    64.53
        ================================================
        ID = 3 (******):     4.00   0.847     6.00    64.53

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     5.20     0.00     0.00     0.00     5.20
        1.00     5.20     0.00     0.00     0.00     6.20
      100.00     5.20     0.00     0.00     0.00   105.20

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):    4.00      0.85      6.00   64.53
      ================================================
      ID= 2  (   2)    :   0.00      0.00      6.00   64.53
      ID= 3  (   2)    :   4.00      0.85      6.00   64.53
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.89   1.452     6.58    47.02
      + ID2= 2 (******):     0.00   0.000     6.00    64.53
        ================================================
        ID = 3 (******):    14.89   1.452     6.58    47.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   14.89      1.45      6.58   47.02
      ================================================
      ID= 2  (   2)    :  14.89      1.45      6.58   47.02
      ID= 3  (   2)    :   0.00      0.00      6.58   47.02
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.01     0.00     0.00     0.00     0.00     0.01
        0.06     0.00     0.00     0.00     0.00     0.06
        0.08     0.00     0.00     0.00     0.00     0.08
        0.12     0.00     0.00     0.00     0.00     0.12
        0.20     0.00     0.00     0.00     0.00     0.20
        0.25     0.00     0.00     0.00     0.00     0.25
        0.30     0.00     0.00     0.00     0.00     0.30
        0.33     0.00     0.00     0.00     0.00     0.33
        0.37     0.00     0.00     0.00     0.00     0.37
        0.39     0.00     0.00     0.00     0.00     0.39
        0.42     1.43     0.00     0.00     0.00     1.85
        0.44     8.83     0.00     0.00     0.00     9.27
        0.47    25.03     0.00     0.00     0.00    25.50
        0.49    52.11     0.00     0.00     0.00    52.61
        0.52    91.81     0.00     0.00     0.00    92.33
        0.53   126.04     0.00     0.00     0.00   126.57

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   14.89      1.45      6.58   47.02
      ================================================
      ID= 2  (   2)    :   7.69      0.41      6.58   47.02
      ID= 3  (   2)    :   7.19      1.04      6.58   47.02
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.81         0.01
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.50         1.00
      Length            (m)=      18.40         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      95.56        67.47
                    over (min)       5.00         5.00
      Storage Coeff.  (min)=       1.16 (ii)    1.16 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.34
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.22         0.00          0.217 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      70.52        41.02          70.22
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.57           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
04897>
04898> ---------------------------------------------------------------------------------------
04899>
04900> --------------------
04901> | ADD HYD  (******)|
04902> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
04903> --------------------          (ha)    (cms)    (hrs)     (mm)
04904>         ID1= 1 (******):     0.82   0.217     6.00    70.22
04905>       + ID2= 2 (******):     0.00   0.000     6.58    47.02
04906>         ==================================================
04907>         ID = 3 (******):     0.82   0.217     6.00    70.22
04908>
04909>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04910> ---------------------------------------------------------------------------------------
04911>
04912> --------------------
04913> | ADD HYD  (******)|
04914> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
04915> --------------------          (ha)    (cms)    (hrs)     (mm)
04916>         ID1= 3 (******):     0.82   0.217     6.00    70.22
04917>       + ID2= 2 (******):     7.19   1.042     6.58    47.02
04918>         ==================================================
04919>         ID = 1 (******):     8.01   1.055     6.58    49.40
04920>
04921>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04922> ---------------------------------------------------------------------------------------
04923> --------------------
04924> | DIVERTHYD(******)|
04925> | IN= 1   # OUT= 5 |
04926> --------------------
04927>      Outflow / Inflow  Relationships
04928>
04929>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
04930>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
04931>         0.00     0.00     0.00     0.00     0.00     0.00
04932>         0.00     0.00     0.00     0.00     0.00     0.00
04933>         0.03     0.00     0.00     0.00     0.00     0.03
04934>         0.04     0.00     0.00     0.00     0.00     0.04
04935>         0.09     0.00     0.00     0.00     0.00     0.09
04936>         0.12     0.00     0.00     0.00     0.00     0.13
04937>         0.20     0.00     0.00     0.00     0.00     0.20
04938>         0.30     0.00     0.00     0.00     0.00     0.30
04939>         0.37     0.00     0.00     0.00     0.00     0.37
04940>         0.43     0.00     0.00     0.00     0.00     0.43
04941>         0.48     0.00     0.00     0.00     0.00     0.48
04942>         0.52     0.00     0.00     0.00     0.00     0.52
04943>         0.57     0.00     0.00     0.00     0.00     0.57
04944>         0.67     0.00     0.00     0.00     0.00     0.67
04945>         0.68     0.00     0.00     0.00     0.00     0.68
04946>         0.68     0.02     0.00     0.00     0.00     0.70
04947>         0.72     0.56     0.00     0.00     0.00     1.28
04948>         0.73     0.75     0.01     0.00     0.00     1.48
04949>         1.10     1.87     0.54     0.00     0.00     3.51
04950>         1.40     2.25     2.61     0.00     0.00     6.26
04951>
04952>                              AREA     QPEAK     TPEAK     R.V.
04953>                              (ha)     (cms)     (hrs)     (mm)
04954>      TOTAL HYD.(ID= 1):     8.01      1.06      6.58    49.40
04955>      ==================================================
04956>      ID= 2  (   3)    :     6.86      0.71      6.58    49.40
04957>      ID= 3  (   3)    :     1.15      0.35      6.58    49.40
04958>      ID= 4  (   3)    :     0.00      0.00      6.58    49.40
04959>      ID= 5  (   3)    :     0.00      0.00      0.00     0.00
04960>      ID= 6  (   3)    :     0.00      0.00      0.00     0.00
04961> ---------------------------------------------------------------------------------------
04962>
04963> --------------------
04964> | ADD HYD  (******)|
04965> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
04966> --------------------          (ha)    (cms)    (hrs)     (mm)
04967>         ID1= 1 (******):     7.69   0.410     6.58    47.02
04968>       + ID2= 2 (******):     6.86   0.707     6.58    49.40
04969>         ==================================================
04970>         ID = 3 (******):    14.55   1.117     6.58    48.14
04971>
04972>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04973> ---------------------------------------------------------------------------------------
04974> --------------------
04975> | CALIB            |
04976> | NASHYD   (******)|   Area     (ha)=  11.36   Curve Number    (CN)= 85.0
04977> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
04978> --------------------   U.H. Tp(hrs)=   0.33
04979>
04980>      Unit Hyd Qpeak  (cms)=   1.315
04981>
04982>      PEAK FLOW       (cms)=   1.006 (i)
04983>      TIME TO PEAK    (hrs)=   6.167
04984>      RUNOFF VOLUME    (mm)=  41.006
04985>      TOTAL RAINFALL   (mm)=  72.519
04986>      RUNOFF COEFFICIENT   =   0.565
04987>
04988>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04989>
04990> ---------------------------------------------------------------------------------------
04991> --------------------
04992> | CALIB            |
04993> | NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
04994> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
04995> --------------------   U.H. Tp(hrs)=   0.22
04996>
04997>      Unit Hyd Qpeak  (cms)=   0.130
04998>
04999>      PEAK FLOW       (cms)=   0.087 (i)
05000>      TIME TO PEAK    (hrs)=   6.083
05001>      RUNOFF VOLUME    (mm)=  40.963
05002>      TOTAL RAINFALL   (mm)=  72.519
05003>      RUNOFF COEFFICIENT   =   0.565
05004>
05005>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05006>
05007> ---------------------------------------------------------------------------------------
05008> --------------------
05009> | CALIB            |
05010> | STANDHYD ( 40600)|   Area     (ha)=  78.37
05011> |ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
05012> --------------------
05013>                             IMPERVIOUS    PERVIOUS (i)
05014>      Surface Area     (ha)=      54.14         24.23
05015>      Dep. Storage     (mm)=       2.00          5.78
05016>      Average Slope     (%)=       1.20          1.20
05017>      Length            (m)=     722.82         47.00
05018>      Mannings n           =      0.015         0.260
05019>
05020>      Max.Eff.Inten.(mm/hr)=      95.56         93.60
05021>                    over (min)      10.00         20.00
05022>      Storage Coeff.  (min)=       8.79 (ii)    18.32 (ii)
05023>      Unit Hyd. Tpeak (min)=      10.00         20.00
05024>      Unit Hyd. peak  (cms)=       0.12          0.06
05025>                                                          *TOTALS*
05026>      PEAK FLOW       (cms)=       9.59          3.20        11.862 (iii)
05027>      TIME TO PEAK    (hrs)=       6.00          6.17          6.00
05028>      RUNOFF VOLUME    (mm)=      70.52         40.34         57.32
05029>      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
05030>      RUNOFF COEFFICIENT   =       0.97          0.56          0.79
05031>
05032>
05033>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05034>            CN*  =  79.0    Ia = Dep. Storage  (Above)
05035>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05036>            THAN THE STORAGE COEFFICIENT.
05037>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05038>
05039> ---------------------------------------------------------------------------------------
05040> --------------------
05041> | ROUTE CHN( 60610)|
05042> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05043> --------------------
05044>                <------ DATA FOR SECTION (   1.1) ------>
05045>                Distance      Elevation       Manning
05046>                    0.00         144.07        0.0450
05047>                    9.00         143.84        0.0450
05048>                   12.00         142.90        0.0450
05049>                   15.00         142.48        0.0450
05050>                   18.00         142.43    0.0450 /0.0350  Main Channel
05051>                   21.00         142.31        0.0350      Main Channel
05052>                   24.00         142.12        0.0350      Main Channel
05053>                   27.00         142.44    0.0350 /0.0450  Main Channel
05054>                   30.00         142.71        0.0450
05055>                   33.00         143.18        0.0450
05056>                   36.00         143.27        0.0450
05057>                   37.00         143.36        0.0450
05058>                   38.00         143.64        0.0450
05059>                   39.00         143.92        0.0450
05060>                   40.00         143.93        0.0450
05061>                   45.00         144.18        0.0450
05062>
05063>       <---------------------- TRAVEL TIME TABLE ---------------------->
05064>        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
05065>          (m)      (m)      (cu.m.)      (cms)         (m/s)      (min)
05066>         0.08   142.20     .282E+02        0.0          0.24      26.26
05067>         0.16   142.27     .113E+03        0.1          0.38      16.54
05068>         0.23   142.35     .257E+03        0.3          0.48      13.09
05069>         0.31   142.43     .477E+03        0.7          0.57      11.02
05070>         0.42   142.54     .969E+03        2.0          0.76       8.24
05071>         0.53   142.65     .157E+04        3.8          0.92       6.80
05072>         0.64   142.76     .224E+04        6.3          1.06       5.90
05073>         0.75   142.87     .299E+04        9.5          1.19       5.26
05074>         0.86   142.98     .379E+04       13.2          1.31       4.77
05075>         0.97   143.09     .463E+04       17.6          1.43       4.37
05076>         1.08   143.20     .552E+04       22.5          1.53       4.09
05077>         1.19   143.31     .653E+04       27.9          1.60       3.90
05078>         1.30   143.42     .761E+04       34.4          1.70       3.69
05079>         1.41   143.53     .874E+04       41.7          1.79       3.49
05080>         1.52   143.64     .989E+04       49.7          1.89       3.32
05081>         1.63   143.75     .111E+05       58.3          1.98       3.17
05082>         1.74   143.85     .123E+05       66.9          2.04       3.06
05083>         1.85   143.96     .137E+05       73.2          2.01       3.11
05084>         1.96   144.07     .153E+05       81.5          2.00       3.13
05085>
05086>                                      <---- hydrograph ---->   <-pipe / channel->
05087>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
05088>                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
05089>    INFLOW : ID= 2 ( 40600)   78.37    11.86    6.00  57.32      0.82      1.27
05090>    OUTFLOW: ID= 1 ( 60600)   78.37    11.40    6.08  57.32      0.80      1.25
05091>
05092>
05093>
05094> ---------------------------------------------------------------------------------------
05095> --------------------
05096> | CALIB            |
05097> | STANDHYD ( 40610)|   Area     (ha)=   3.94
05098> |ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
05099> --------------------
05100>                             IMPERVIOUS    PERVIOUS (i)
05101>      Surface Area     (ha)=       1.75          2.18
05102>      Dep. Storage     (mm)=       2.00          8.00
05103>      Average Slope     (%)=       2.90          2.90
05104>      Length            (m)=     162.03         40.00
05105>      Mannings n           =      0.015         0.340
05106>
05107>      Max.Eff.Inten.(mm/hr)=      95.56         70.54
05108>                    over (min)       5.00         15.00
05109>      Storage Coeff.  (min)=       2.75 (ii)    11.48 (ii)
05110>      Unit Hyd. Tpeak (min)=       5.00         15.00
05111>      Unit Hyd. peak  (cms)=       0.28          0.09
05112>                                                          *TOTALS*
05113>      PEAK FLOW       (cms)=       0.33          0.27          0.566 (iii)
05114>      TIME TO PEAK    (hrs)=       6.00          6.08          6.00
05115>      RUNOFF VOLUME    (mm)=      70.52         34.05         45.58
05116>      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
05117>      RUNOFF COEFFICIENT   =       0.97          0.47          0.63
05118>
05119> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05120>
05121>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05122>            CN*  =  76.9    Ia = Dep. Storage  (Above)
05123>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05124>            THAN THE STORAGE COEFFICIENT.
05125>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05126>
05127> ---------------------------------------------------------------------------------------
05128>
05129> --------------------
05130> | ADD HYD  ( 50600)|
05131> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
05132> --------------------          (ha)    (cms)    (hrs)     (mm)
05133>         ID1= 1 ( 40610):     3.94   0.566     6.00    45.58
05134>       + ID2= 2 ( 60600):    78.37  11.396     6.08    57.32
05135>         ==================================================
05136>         ID = 3 ( 50600):    82.31  11.758     6.08    56.76
05137>
05138>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05139> ---------------------------------------------------------------------------------------
05140> --------------------
05141> | ROUTE CHN( 60610)|
05142> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05143> --------------------
05144>                <------ DATA FOR SECTION (   1.1) ------>
05145>                Distance      Elevation       Manning
05146>                    0.00         143.40        0.0450
05147>                    2.00         142.92        0.0450
05148>                    4.00         142.14        0.0450
05149>                    6.00         141.49        0.0450
05150>                    8.00         141.11        0.0450
05151>                   10.00         141.00    0.0450 /0.0350  Main Channel
05152>                   12.00         140.98        0.0350      Main Channel
05153>                   14.00         140.82        0.0350      Main Channel
05154>                   16.00         141.02    0.0350 /0.0450  Main Channel
05155>                   18.00         141.19        0.0450
05156>                   20.00         141.19        0.0450
05157>                   22.00         141.44        0.0450
05158>                   24.00         142.00        0.0450
05159>                   26.00         142.20        0.0450
05160>                   28.00         142.39        0.0450
05161>                   30.00         142.96        0.0450
05162>                   31.00         143.13        0.0450
05163>                   32.00         143.28        0.0450
05164>                   33.00         143.41        0.0450
05165>                   34.00         143.44        0.0450
05166>
05167>       <---------------------- TRAVEL TIME TABLE ---------------------->
05168>        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
05169>          (m)      (m)      (cu.m.)      (cms)         (m/s)      (min)
05170>         0.09   140.91     .314E+02        0.0          0.24      23.12
05171>         0.18   141.00     .132E+03        0.1          0.31      17.83
05172>         0.33   141.14     .502E+03        0.9          0.58       9.54
05173>         0.47   141.29     .107E+04        2.4          0.74       7.47
05174>         0.61   141.43     .175E+04        4.7          0.89       6.20
05175>         0.75   141.57     .251E+04        7.9          1.05       5.31
05176>         0.89   141.71     .332E+04       11.8          1.19       4.68
05177>         1.03   141.85     .416E+04       16.5          1.32       4.21
05178>         1.17   141.99     .506E+04       21.8          1.44       3.86
05179>         1.31   142.13     .601E+04       27.5          1.52       3.64
05180>         1.45   142.27     .705E+04       34.0          1.61       3.46
05181>         1.59   142.41     .818E+04       41.5          1.69       3.29
05182>         1.73   142.55     .936E+04       50.2          1.79       3.11
05183>         1.88   142.69     .106E+05       59.8          1.88       2.95
05184>         2.02   142.84     .118E+05       70.2          1.97       2.81
05185>         2.16   142.98     .132E+05       81.2          2.06       2.70
05186>         2.30   143.12     .145E+05       92.6          2.12       2.61
05187>         2.44   143.26     .159E+05      104.8          2.19       2.54
05188>         2.58   143.40     .174E+05      117.7          2.24       2.47
05189>
05190>                                      <---- hydrograph ---->   <-pipe / channel->
05191>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
05192>                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
05193>    INFLOW : ID= 2 ( 50600)   82.31    11.76    6.08  56.76      0.89      1.18
05194>    OUTFLOW: ID= 1 ( 60610)   82.31    11.11    6.17  56.76      0.86      1.16
05195>
05196>
05197>
05198> ---------------------------------------------------------------------------------------
05199> --------------------
05200> | CALIB            |
05201> | STANDHYD ( 40620)|   Area     (ha)=   5.67
05202> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
```

```
05203> --------------------
05204>                              IMPERVIOUS    PERVIOUS (i)
05205>      Surface Area     (ha)=       4.30         1.37
05206>      Dep. Storage     (mm)=       2.00         5.59
05207>      Average Slope     (%)=       1.50         1.50
05208>      Length            (m)=     194.41        43.00
05209>      Mannings n            =      0.015        0.270
05210>
05211>      Max.Eff.Inten.(mm/hr)=      95.56       114.16
05212>                   over (min)        5.00        15.00
05213>      Storage Coeff.  (min)=       3.74 (ii)   11.72 (ii)
05214>      Unit Hyd. Tpeak (min)=       5.00        15.00
05215>      Unit Hyd. peak  (cms)=       0.25         0.09
05216>                                                          *TOTALS*
05217>      PEAK FLOW       (cms)=       0.90         0.28          1.153 (iii)
05218>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
05219>      RUNOFF VOLUME    (mm)=      70.52        43.15          59.75
05220>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
05221>      RUNOFF COEFFICIENT   =       0.97         0.60           0.82
05222>
05223> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05224>
05225>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05226>              CN*  =  79.0    Ia = Dep. Storage  (Above)
05227>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05228>            THAN THE STORAGE COEFFICIENT.
05229>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05230>
05231> ---------------------------------------------------------------------------
05232>
05233> --------------------
05234> | ADD HYD  ( 50610)|
05235> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05236> --------------------          (ha)    (cms)    (hrs)     (mm)
05237>         ID1= 1 ( 40620):     5.67   1.153     6.00    59.75
05238>       + ID2= 2 ( 60610):    82.31  11.107     6.17    56.76
05239>         ================================================
05240>         ID = 3 ( 50610):    87.98  11.548     6.17    56.95
05241>
05242>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05243> ---------------------------------------------------------------------------
05244> --------------------
05245> | ROUTE CHN( 60620)|
05246> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05247> --------------------
05248>                <------ DATA FOR SECTION (   1.1) ------>
05249>                Distance      Elevation       Manning
05250>                    0.00         142.03        0.0450
05251>                    1.00         141.71        0.0450
05252>                    2.00         141.35        0.0450
05253>                    3.00         141.01        0.0450
05254>                    4.00         140.79        0.0450
05255>                    5.00         140.56        0.0450
05256>                    6.00         140.44        0.0450
05257>                    7.00         140.30    0.0450 /0.0350  Main Channel
05258>                    8.00         140.08        0.0350      Main Channel
05259>                    9.00         139.88        0.0350      Main Channel
05260>                   10.00         139.97        0.0350      Main Channel
05261>                   11.00         140.12        0.0350      Main Channel
05262>                   12.00         140.35    0.0350 /0.0450  Main Channel
05263>                   13.00         140.52        0.0450
05264>                   14.00         140.73        0.0450
05265>                   15.00         140.97        0.0450
05266>                   16.00         141.27        0.0450
05267>                   17.00         141.57        0.0450
05268>                   18.00         141.89        0.0450
05269>                   19.00         142.07        0.0450
05270>
05271>       <---------------------- TRAVEL TIME TABLE ---------------------->
05272>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
05273>          (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
05274>         0.10    139.99    .161E+02        0.0         0.36       8.21
05275>         0.21    140.09    .579E+02        0.2         0.59       5.04
05276>         0.31    140.19    .120E+03        0.5         0.78       3.79
05277>         0.42    140.30    .200E+03        1.1         0.95       3.12
05278>         0.53    140.41    .313E+03        2.1         1.18       2.51
05279>         0.65    140.53    .456E+03        3.5         1.36       2.18
05280>         0.76    140.65    .630E+03        5.3         1.50       1.98
05281>         0.88    140.76    .826E+03        7.6         1.63       1.82
05282>         0.99    140.88    .104E+04       10.3         1.75       1.69
05283>         1.11    140.99    .128E+04       13.4         1.87       1.59
05284>         1.23    141.11    .154E+04       17.1         1.98       1.50
05285>         1.34    141.22    .180E+04       21.2         2.09       1.42
05286>         1.46    141.34    .209E+04       25.8         2.20       1.35
05287>         1.57    141.45    .239E+04       30.9         2.30       1.29
05288>         1.69    141.57    .270E+04       36.4         2.40       1.24
05289>         1.80    141.69    .303E+04       42.4         2.49       1.19
05290>         1.92    141.80    .337E+04       48.9         2.58       1.15
05291>         2.04    141.92    .373E+04       55.9         2.67       1.11
05292>         2.15    142.03    .411E+04       63.2         2.74       1.08
05293>
05294>                                    <---- hydrograph ---->   <-pipe / channel->
05295>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
05296>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
05297>    INFLOW : ID= 2 ( 50610)   87.98   11.55    6.17  56.95      1.04      1.80
05298>    OUTFLOW: ID= 1 ( 60620)   87.98   11.61    6.17  56.95      1.04      1.80
05299>
05300>
05301>
05302> ---------------------------------------------------------------------------
05303> --------------------
05304> | CALIB            |
05305> | STANDHYD ( 40640)|   Area     (ha)=   2.13
05306> |ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
05307> --------------------
05308>                              IMPERVIOUS    PERVIOUS (i)
05309>      Surface Area     (ha)=       0.91         1.23
05310>      Dep. Storage     (mm)=       2.00         7.60
05311>      Average Slope     (%)=       1.70         1.70
05312>      Length            (m)=     119.23        45.00
05313>      Mannings n            =      0.015        0.330
05314>
05315>      Max.Eff.Inten.(mm/hr)=      95.56        64.99
05316>                   over (min)        5.00        15.00
05317>      Storage Coeff.  (min)=       2.69 (ii)   13.85 (ii)
05318>      Unit Hyd. Tpeak (min)=       5.00        15.00
05319>      Unit Hyd. peak  (cms)=       0.29         0.08
05320>                                                          *TOTALS*
05321>      PEAK FLOW       (cms)=       0.18         0.14          0.298 (iii)
05322>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
05323>      RUNOFF VOLUME    (mm)=      70.52        34.71          46.02
05324>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
05325>      RUNOFF COEFFICIENT   =       0.97         0.48           0.63
05326>
05327> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05328>
05329>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05330>              CN*  =  78.1    Ia = Dep. Storage  (Above)
05331>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05332>            THAN THE STORAGE COEFFICIENT.
05333>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05334>
05335> ---------------------------------------------------------------------------
05336>
05337> --------------------
05338> | ADD HYD  ( 50630)|
05339> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05340> --------------------          (ha)    (cms)    (hrs)     (mm)
05341>         ID1= 1 ( 40640):     2.13   0.298     6.00    46.02
05342>       + ID2= 2 ( 60620):    87.98  11.613     6.17    56.95
05343>         ================================================
05344>         ID = 3 ( 50630):    90.11  11.776     6.17    56.69
05345>
05346>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05347> ---------------------------------------------------------------------------
05348> --------------------
05349> | CALIB            |
05350> | STANDHYD ( 40630)|   Area     (ha)=  20.54
05351> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
05352> --------------------
05353>                              IMPERVIOUS    PERVIOUS (i)
05354>      Surface Area     (ha)=      13.13         7.40
05355>      Dep. Storage     (mm)=       2.00         5.95
05356>      Average Slope     (%)=       1.40         1.40
05357>      Length            (m)=     370.01        42.00
05358>      Mannings n            =      0.015        0.270
05359>
05360>      Max.Eff.Inten.(mm/hr)=      95.56        84.86
05361>                   over (min)        5.00        15.00
05362>      Storage Coeff.  (min)=       5.62 (ii)   14.66 (ii)
05363>      Unit Hyd. Tpeak (min)=       5.00        15.00
05364>      Unit Hyd. peak  (cms)=       0.20         0.08
05365>                                                          *TOTALS*
05366>      PEAK FLOW       (cms)=       2.74         1.02          3.625 (iii)
05367>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
05368>      RUNOFF VOLUME    (mm)=      70.52        39.20          55.69
05369>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
05370>      RUNOFF COEFFICIENT   =       0.97         0.54           0.77
05371>
05372>
05373>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05374>              CN*  =  79.5    Ia = Dep. Storage  (Above)
05375>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05376>            THAN THE STORAGE COEFFICIENT.
05377>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05378>
05379> ---------------------------------------------------------------------------
05380>
05381> --------------------
05382> | ADD HYD  ( 50640)|
05383> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05384> --------------------          (ha)    (cms)    (hrs)     (mm)
05385>         ID1= 1 ( 40630):    20.54   3.625     6.00    55.69
05386>       + ID2= 2 ( 50630):    90.11  11.776     6.17    56.69
05387>         ================================================
05388>         ID = 3 ( 50640):   110.65  13.548     6.17    56.50
05389>
05390>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05391> ---------------------------------------------------------------------------
05392> --------------------
05393> | RESERVOIR(******)|     OVERFLOW IS ON
05394> | IN= 2---> OUT= 1 |
05395> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
05396> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
05397>                            0.0000     0.0000   |    3.4010      4.4390
05398>                            0.0530     0.4910   |    4.8380      5.5060
05399>                            0.0890     0.7040   |    5.8470      5.5380
05400>                            0.2040     1.0890   |    6.5980      5.9190
05401>                            0.3240     1.4800   |    7.2560      6.2250
05402>                            0.3890     1.7490   |    7.9030      6.4820
05403>                            0.4470     1.9970   |    8.4910      6.6820
05404>                            0.5090     2.3490   |   12.0680      7.1150
05405>                            0.7420     2.9150   |   20.0000      7.2000
05406>                            1.7580     3.6690   |    0.0000      0.0000
05407>
05408>                                AREA     QPEAK     TPEAK       R.V.
05409>                                 (ha)     (cms)     (hrs)       (mm)
05410>    INFLOW : ID= 2 ( 50640)    110.646     13.548      6.17      56.50
05411>    OUTFLOW: ID= 1 (******)    110.646      2.392      7.08      56.47
05412>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
05413>
05414>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
05415>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
05416>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
05417>
05418>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 17.65
05419>                    TIME SHIFT OF PEAK FLOW          (min)= 55.00
05420>                    MAXIMUM  STORAGE   USED       (ha.m.)=  3.9662
05421>
05422> ---------------------------------------------------------------------------
05423>
05424>   --------------------------
05425>   | Junction Command(30651003) |
05426>   --------------------------
05427>
05428>                               AREA     QPEAK   TPEAK     R.V.
05429>                                (ha)     (cms)    (hrs)     (mm)
05430>   INFLOW : ID= 3(30651001)     0.00      0.00    0.00      0.00
05431>   OUTFLOW: ID= 2(30651003)     0.00      0.00    0.00      0.00
05432>
05433>   ---------------------------------------------------------------------------
05434>
05435> --------------------
05436> | ADD HYD  (******)|
05437> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05438> --------------------          (ha)    (cms)    (hrs)     (mm)
05439> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
05440> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
05441>         ID1= 1 (******):   110.65   2.392     7.08    56.47
05442>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
05443>         ================================================
05444>         ID = 3 (******):   110.65   2.392     7.08    56.47
05445>
05446>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05447> ---------------------------------------------------------------------------
05448>
05449> --------------------
05450> | ADD HYD  (******)|
05451> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
05452> --------------------          (ha)    (cms)    (hrs)     (mm)
05453>         ID1= 3 (******):   110.65   2.392     7.08    56.47
05454>       + ID2= 2 (******):     0.75   0.087     6.08    40.96
05455>         ================================================
05456>         ID = 1 (******):   111.40   2.402     7.08    56.37
05457>
05458>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05459> ---------------------------------------------------------------------------
05460>
05461> --------------------
05462> | ADD HYD  (******)|
05463> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05464> --------------------          (ha)    (cms)    (hrs)     (mm)
05465>         ID1= 1 (******):    11.36   1.006     6.17    41.01
05466>       + ID2= 2 (******):   111.40   2.402     7.08    56.37
05467>         ================================================
05468>         ID = 3 (******):   122.76   2.669     6.92    54.94
05469>
05470>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05471> ---------------------------------------------------------------------------
05472> --------------------
05473> | ROUTE CHN(******)|
05474> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05475> --------------------
05476>                <------ DATA FOR SECTION (   1.1) ------>
05477>                Distance      Elevation       Manning
05478>                    0.00         447.10        0.0450
05479>                   42.83         446.80        0.0450
05480>                   42.89         446.80        0.0450
05481>                   43.24         446.79        0.0450
05482>                  122.57         446.48        0.0450
05483>                  154.02         446.22        0.0450
05484>                  191.79         446.32    0.0450 /0.0350  Main Channel
05485>                  199.05         442.27        0.0350      Main Channel
05486>                  199.74         442.33        0.0350      Main Channel
05487>                  212.02         444.19        0.0350      Main Channel
05488>                  232.17         444.54    0.0350 /0.0450  Main Channel
05489>                  348.58         444.42        0.0450
05490>                  359.23         444.30        0.0450
05491>                  381.33         444.03        0.0450
05492>                  483.65         444.18        0.0450
05493>                  548.64         445.87        0.0450
05494>
05495>       <---------------------- TRAVEL TIME TABLE ---------------------->
05496>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
05497>          (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
05498>         0.19    442.46    .184E+03        0.1         0.65       24.29
05499>         0.38    442.65    .662E+03        0.7         1.01       15.64
05500>         0.57    442.84    .143E+04        2.0         1.31       12.09
05501>         0.76    443.03    .247E+04        4.1         1.57       10.05
05502>         0.95    443.22    .381E+04        7.3         1.81        8.70
05503>         1.14    443.41    .543E+04       11.7         2.04        7.73
05504>         1.33    443.60    .733E+04       17.5         2.26        6.99
05505>         1.52    443.79    .952E+04       24.8         2.46        6.41
05506>         1.71    443.98    .120E+05       33.7         2.66        5.93
05507>         1.89    444.16    .211E+05       47.0         2.11        7.49
05508>         2.08    444.35    .469E+05       73.0         1.47       10.71
```

```
        2.27   444.54    .855E+05     117.6          1.30      12.12
        2.46   444.73    .140E+06     240.0          1.62       9.75
        2.65   444.92    .197E+06     400.4          1.92       8.20
        2.84   445.11    .255E+06     595.0          2.21       7.13
        3.03   445.30    .314E+06     821.8          2.48       6.37
        3.22   445.49    .374E+06    1079.2          2.73       5.78
        3.41   445.68    .436E+06    1366.3          2.96       5.32
        3.60   445.87    .500E+06    1682.3          3.19       4.95

                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  122.76     2.67    6.92  54.94      0.63      1.38
   OUTFLOW: ID= 1 (******)  122.76     2.62    7.08  54.94      0.63      1.38


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.921
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.45   0.056     6.08    40.92
      + ID2= 2 (******):   122.76   2.624     7.08    54.94
        ================================================
        ID = 3 (******):   123.21   2.630     7.08    54.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.19   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.220 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.993
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.39   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.083

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.898
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.39   0.050     6.08    40.90
      + ID2= 2 (******):     2.19   0.220     6.08    40.99
        ================================================
        ID = 3 (******):     2.58   0.269     6.08    40.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.58   0.269     6.08    40.98
      + ID2= 2 (******):   123.21   2.630     7.08    54.89
        ================================================
        ID = 1 (******):   125.79   2.671     7.08    54.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         429.12        0.0450
                  37.54         428.86        0.0450
                  53.31         428.70        0.0450
                  81.17         428.24        0.0450
                  99.28         428.15    0.0450 /0.0350  Main Channel
                 114.53         427.72        0.0350      Main Channel
                 119.88         426.51        0.0350      Main Channel
                 124.17         425.84        0.0350      Main Channel
                 206.01         425.90        0.0350      Main Channel
                 209.64         426.51        0.0350      Main Channel
                 214.21         426.89        0.0350      Main Channel
                 231.49         427.17        0.0350      Main Channel
                 268.61         427.89    0.0350 /0.0450  Main Channel
                 351.58         428.15        0.0450
                 368.27         428.31        0.0450
                 405.75         428.52        0.0450
                 416.79         428.59        0.0450
                 440.06         428.76        0.0450
                 469.88         428.97        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.16   426.00    .218E+04       4.1          0.39       8.87
       0.31   426.16    .495E+04      15.8          0.67       5.22
       0.47   426.32    .779E+04      33.2          0.89       3.92
       0.63   426.47    .107E+05      55.4          1.08       3.22
       0.79   426.63    .137E+05      81.8          1.25       2.78
       0.94   426.79    .167E+05     112.4          1.40       2.48
       1.10   426.95    .199E+05     144.6          1.52       2.29
       1.26   427.10    .233E+05     176.4          1.58       2.20
       1.42   427.26    .271E+05     214.5          1.65       2.11
       1.57   427.42    .312E+05     258.4          1.73       2.01
       1.73   427.58    .356E+05     307.7          1.81       1.93
       1.89   427.73    .402E+05     362.0          1.88       1.85
       2.05   427.89    .452E+05     415.1          1.91       1.82
       2.23   428.07    .525E+05     501.3          1.99       1.74
       2.41   428.25    .621E+05     609.1          2.05       1.70
       2.59   428.43    .733E+05     739.1          2.10       1.65
       2.77   428.61    .862E+05     886.8          2.15       1.62
       2.95   428.79    .101E+06    1053.9          2.19       1.59
       3.13   428.97    .116E+06    1240.2          2.22       1.57


                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  125.79     2.67    7.08  54.61      0.10      0.39
   OUTFLOW: ID= 1 (******)  125.79     2.64    7.25  54.61      0.10      0.39


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.250 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  40.999
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         443.75        0.0000
                   8.50         443.74        0.0450
                  35.47         443.64        0.0450
                  64.60         443.29        0.0450
                  74.71         443.18        0.0450
                  80.25         443.17        0.0450
                 112.17         443.12    0.0450 /0.0350  Main Channel
                 131.57         442.76        0.0350      Main Channel
                 137.50         442.66        0.0350      Main Channel
                 137.91         442.67        0.0350      Main Channel
                 152.28         442.24        0.0350      Main Channel
                 167.40         441.39        0.0350      Main Channel
                 178.29         441.56        0.0350      Main Channel
                 216.75         442.01        0.0350      Main Channel
                 221.54         442.05    0.0350 /0.0450  Main Channel
                 334.66         442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.05   441.45    .216E+02       0.0          0.17      16.51
       0.11   441.50    .864E+02       0.1          0.28      10.40
       0.16   441.56    .194E+03       0.4          0.36       7.94
       0.22   441.61    .350E+03       0.9          0.43       6.75
       0.27   441.67    .561E+03       1.6          0.49       5.86
       0.33   441.72    .825E+03       2.6          0.55       5.20
       0.38   441.78    .114E+04       4.1          0.62       4.68
       0.44   441.83    .152E+04       5.9          0.67       4.27
       0.49   441.89    .194E+04       8.2          0.73       3.94
       0.55   441.94    .242E+04      11.0          0.79       3.67
       0.60   442.00    .296E+04      14.3          0.84       3.44
       0.66   442.05    .355E+04      18.1          0.88       3.27
       0.71   442.11    .425E+04      23.6          0.96       3.00
       0.78   442.17    .523E+04      31.0          1.02       2.82
       0.84   442.24    .641E+04      39.6          1.07       2.70
       0.91   442.30    .778E+04      49.3          1.10       2.63
       0.97   442.36    .935E+04      60.5          1.12       2.57
       1.03   442.43    .111E+05      73.5          1.14       2.52
       1.10   442.49    .131E+05      88.2          1.16       2.47


                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   37.74     1.00    6.58  51.35      0.23      0.44
   OUTFLOW: ID= 1 (******)   37.74     1.00    7.00  51.34      0.23      0.44


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.297 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  41.014
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.566

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.24   0.297     6.33    41.01
      + ID2= 2 (******):    37.74   1.000     7.00    51.34
        ================================================
        ID = 3 (******):    41.98   1.286     6.42    50.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.59   0.250     6.17    41.00
      + ID2= 2 (******):    41.98   1.286     6.42    50.30
        ================================================
        ID = 3 (******):    44.57   1.495     6.25    49.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         429.12        0.0500
                  37.54         428.86        0.0500
                  53.31         428.70        0.0500
                  81.17         428.24        0.0500
                  99.28         428.15    0.0500 /0.0300  Main Channel
                 114.53         427.72        0.0300      Main Channel
                 119.88         426.51        0.0300      Main Channel
                 124.17         425.84        0.0300      Main Channel
                 206.01         425.90        0.0300      Main Channel
                 209.64         426.51        0.0300      Main Channel
                 214.21         426.89        0.0300      Main Channel
                 231.49         427.17        0.0300      Main Channel
                 268.61         427.89    0.0300 /0.0500  Main Channel
                 351.58         428.15        0.0500
                 368.27         428.31        0.0500
                 405.75         428.52        0.0500
                 416.79         428.59        0.0500
                 440.06         428.76        0.0500
                 469.88         428.97        0.0500

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.16   426.00    .187E+04       9.2          0.88       3.40
```

```
        0.31   426.16    .424E+04      35.4          1.49       2.00
        0.47   426.32    .666E+04      74.1          1.98       1.50
        0.63   426.47    .914E+04     123.7          2.41       1.23
        0.79   426.63    .117E+05     182.8          2.79       1.07
        0.94   426.79    .143E+05     251.2          3.13       0.95
        1.10   426.95    .170E+05     323.1          3.39       0.88
        1.26   427.10    .199E+05     394.0          3.52       0.84
        1.42   427.26    .232E+05     479.1          3.69       0.81
        1.57   427.42    .267E+05     577.3          3.86       0.77
        1.73   427.58    .304E+05     687.4          4.03       0.74
        1.89   427.73    .344E+05     808.6          4.20       0.71
        2.05   427.89    .387E+05     927.4          4.28       0.70
        2.23   428.07    .449E+05    1119.2          4.45       0.67
        2.41   428.25    .531E+05    1356.2          4.56       0.65
        2.59   428.43    .627E+05    1638.9          4.66       0.64
        2.77   428.61    .737E+05    1955.8          4.73       0.63
        2.95   428.79    .859E+05    2310.2          4.79       0.62
        3.13   428.97    .996E+05    2701.5          4.84       0.61

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    44.57     1.50    6.25  49.76      0.03      0.88
   OUTFLOW: ID= 1 (******)    44.57     1.49    6.33  49.76      0.03      0.88


--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):   125.79   2.635     7.25    54.61
      + ID2= 2 (******):    44.57   1.487     6.33    49.76
        ================================================
        ID = 3 (******):   170.36   3.798     7.17    53.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.98         3.60
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.91         1.12
     Length            (m)=     246.54       157.18
     Mannings n           =      0.015        0.300

     Max.Eff.Inten.(mm/hr)=      95.56        36.17
                   over (min)        5.00        40.00
     Storage Coeff.  (min)=       5.01 (ii)   37.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.21         0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.28         0.22          1.364 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.50          6.00
     RUNOFF VOLUME    (mm)=      70.52        41.02         58.13
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.57          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     8.58   1.364     6.00    58.13
      + ID2= 2 (******):    14.55   1.117     6.58    48.14
        ================================================
        ID = 3 ( 50650):    23.13   2.059     6.00    51.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50650):    23.13   2.059     6.00    51.85
      + ID2= 2 (******):   170.36   3.798     7.17    53.34
        ================================================
        ID = 1 ( 50650):   193.49   5.083     7.00    53.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         129.45        0.0450
                  6.00         129.24        0.0450
                  8.00         128.92        0.0450
                 10.00         128.26        0.0450
                 12.00         127.37        0.0450
                 14.00         126.79        0.0450
                 16.00         126.20        0.0450
                 18.00         125.80        0.0450
                 21.00         125.29        0.0450
                 24.00         124.85        0.0450
                 27.00         124.54        0.0350      Main Channel
                 30.00         124.62        0.0350      Main Channel
                 33.00         124.84    0.0350 /0.0450  Main Channel
                 36.00         125.26        0.0450
                 39.00         125.86        0.0450
                 42.00         126.49        0.0450
                 48.00         128.97        0.0450
                 54.00         129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.26   124.80    .390E+03       0.9          0.76       7.18
       0.51   125.06    .124E+04       4.9          1.29       4.21
       0.77   125.31    .239E+04      12.3          1.67       3.25
       1.03   125.57    .380E+04      23.2          1.99       2.73
       1.28   125.83    .544E+04      37.9          2.27       2.40
       1.54   126.08    .731E+04      56.6          2.52       2.15
       1.80   126.34    .937E+04      79.6          2.77       1.96
       2.05   126.60    .116E+05     107.2          3.01       1.81
       2.31   126.85    .140E+05     139.3          3.25       1.67
       2.57   127.11    .165E+05     175.4          3.47       1.57
       2.82   127.37    .191E+05     215.7          3.68       1.48
       3.08   127.62    .219E+05     261.1          3.89       1.39
       3.34   127.88    .247E+05     310.7          4.10       1.32
       3.59   128.14    .276E+05     364.3          4.30       1.26
       3.85   128.40    .307E+05     421.6          4.48       1.21
       4.11   128.65    .338E+05     482.7          4.65       1.17
       4.36   128.91    .371E+05     548.1          4.82       1.13
       4.62   129.17    .406E+05     600.9          4.83       1.13
       4.88   129.42    .446E+05     634.1          4.63       1.17

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50650)   193.49     5.08    7.00  53.16      0.52      1.30
   OUTFLOW: ID= 1 ( 60650)   193.49     5.07    7.00  53.16      0.52      1.30


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--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.06        13.71
     Dep. Storage     (mm)=       2.00         6.10
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     581.73        82.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      95.56        45.40
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       7.22 (ii)   24.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.17         0.05
                                                    *TOTALS*
     PEAK FLOW       (cms)=       8.89         0.93          9.428 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25          6.00
     RUNOFF VOLUME    (mm)=      70.52        34.21         60.35
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.47          0.83


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40670):    50.76   9.428     6.00    60.35
      + ID2= 2 ( 60650):   193.49   5.073     7.00    53.16
        ================================================
        ID = 3 ( 50670):   244.25  12.278     6.00    54.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         115.77        0.0450
                 20.00         115.51        0.0450
                 24.00         114.73        0.0450
                 28.00         113.17    0.0450 /0.0350  Main Channel
                 32.00         113.16    0.0350 /0.0450  Main Channel
                 36.00         114.68        0.0450
                 40.00         115.05        0.0450
                 44.00         115.27        0.0450
                 48.00         115.46        0.0450
                 52.00         115.71        0.0450
                 54.00         115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.14   113.30    .275E+03       0.3          0.60      13.60
       0.27   113.43    .612E+03       1.2          0.93       8.76
       0.41   113.57    .996E+03       2.4          1.18       6.88
       0.55   113.71    .143E+04       4.1          1.39       5.85
       0.69   113.84    .191E+04       6.1          1.57       5.18
       0.82   113.98    .244E+04       8.6          1.73       4.70
       0.96   114.12    .301E+04      11.6          1.87       4.34
       1.10   114.26    .363E+04      14.9          2.00       4.06
       1.24   114.39    .430E+04      18.8          2.12       3.82
       1.37   114.53    .502E+04      23.1          2.24       3.63
       1.51   114.67    .579E+04      27.9          2.34       3.46
       1.65   114.81    .664E+04      32.5          2.38       3.41
       1.78   114.94    .763E+04      37.8          2.41       3.36
       1.92   115.08    .878E+04      44.0          2.44       3.33
       2.06   115.22    .101E+05      50.8          2.45       3.31
       2.20   115.35    .117E+05      58.8          2.46       3.30
       2.33   115.49    .134E+05      68.1          2.47       3.29
       2.47   115.63    .157E+05      74.2          2.30       3.53
       2.61   115.77    .188E+05      85.0          2.20       3.69

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50670)   244.25    12.28    6.00  54.66      0.99      1.90
   OUTFLOW: ID= 1 ( 60670)   244.25    11.06    6.00  54.65      0.93      1.84


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.22         4.63
     Dep. Storage     (mm)=       2.00         8.04
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     269.03        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      95.56        57.27
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.00 (ii)   15.40 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.07
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.56         0.42          1.856 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      70.52        34.33         54.27
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.47          0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40700):    10.86   1.856     6.00    54.27
      + ID2= 2 ( 60670):   244.25  11.058     6.00    54.65
        ================================================
        ID = 3 ( 50680):   255.11  12.913     6.00    54.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50         0.69
     Dep. Storage     (mm)=       2.00         7.98
     Average Slope     (%)=       0.60         0.60
     Length            (m)=      89.27        69.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      95.56        39.23
                   over (min)        5.00        30.00
```

```
      Storage Coeff.  (min)=       3.09 (ii)   28.08 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.27         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.12         0.04          0.144 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      70.52        33.70         48.01
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.46          0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       7.93        17.56
      Dep. Storage     (mm)=       2.00         8.01
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     412.26        40.00
      Mannings n            =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      95.56        57.47
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       4.72 (ii)   14.17 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.22         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.81         1.61          3.181 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      70.52        32.20         42.73
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.44          0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.144     6.00    48.01
      + ID2= 2 ( 40690):    25.49   3.181     6.00    42.73
        ================================================
        ID = 3 ( 50690):    26.69   3.325     6.00    42.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   255.11  12.913     6.00    54.64
      + ID2= 2 ( 50690):    26.69   3.325     6.00    42.97
        ================================================
        ID = 3 ( 50700):   281.80  16.238     6.00    53.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         109.54        0.0450
                   4.00         108.85        0.0450
                   8.00         108.76        0.0450
                  12.00         108.31        0.0450
                  16.00         107.44        0.0450
                  20.00         107.22        0.0450
                  24.00         107.06        0.0450
                  28.00         107.10        0.0450
                  32.00         107.04        0.0450
                  36.00         106.98        0.0450
                  40.00         106.83        0.0350      Main Channel
                  44.00         106.49        0.0350      Main Channel
                  48.00         106.92    0.0350 /0.0450  Main Channel
                  52.00         107.19        0.0450
                  56.00         107.11        0.0450
                  60.00         107.14        0.0450
                  64.00         107.27        0.0450
                  68.00         107.71        0.0450
                  72.00         108.37        0.0450
                  80.00         109.55        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   106.60    .128E+03       0.1         0.43       35.47
        0.23   106.72    .513E+03       0.4         0.69       22.34
        0.35   106.83    .115E+04       1.1         0.90       17.05
        0.52   107.00    .277E+04       3.6         1.21       12.69
        0.69   107.17    .675E+04       8.9         1.21       12.64
        0.86   107.34    .135E+05      19.9         1.35       11.35
        1.02   107.51    .211E+05      36.3         1.58        9.70
        1.19   107.68    .291E+05      57.8         1.82        8.39
        1.36   107.85    .375E+05      84.0         2.06        7.43
        1.53   108.02    .461E+05     114.5         2.28        6.71
        1.70   108.19    .550E+05     149.1         2.49        6.15
        1.87   108.35    .642E+05     187.4         2.68        5.71
        2.04   108.52    .737E+05     228.8         2.85        5.37
        2.21   108.69    .837E+05     274.1         3.01        5.09
        2.37   108.86    .942E+05     316.2         3.08        4.97
        2.54   109.03    .105E+06     372.6         3.25        4.72
        2.71   109.20    .117E+06     433.4         3.40        4.50
        2.88   109.37    .129E+06     498.6         3.55        4.31
        3.05   109.54    .141E+06     568.2         3.70        4.14

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  281.80    16.24     6.00  53.53      0.80      1.30
   OUTFLOW: ID= 1 ( 60700)  281.80    11.97     6.17  53.53      0.73      1.25


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.57         4.79
      Dep. Storage     (mm)=       2.00         8.94
      Average Slope     (%)=       3.90         3.90
      Length            (m)=     205.82        41.00
      Mannings n            =      0.015        0.360

      Max.Eff.Inten.(mm/hr)=      95.56        58.30
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       2.91 (ii)   11.96 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.28         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.35         0.48          0.759 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      70.52        32.42         40.33
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.45          0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.759     6.00    40.33
      + ID2= 2 ( 60700):   281.80  11.970     6.17    53.53
        ================================================
        ID = 3 ( 50710):   288.15  12.483     6.17    53.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.12         3.92
      Dep. Storage     (mm)=       2.00         5.64
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     408.55        40.00
      Mannings n            =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=      95.56        61.31
                  over (min)        5.00        10.00
      Storage Coeff.  (min)=       4.74 (ii)    8.15 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.22         0.13
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.41         0.51          5.918 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
      RUNOFF VOLUME    (mm)=      70.52        35.27         64.76
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.49          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.7080      1.0040
                           0.2890      0.3890   |    0.7750      1.0700
                           0.3270      0.4500   |    0.9210      1.2580
                           0.3600      0.6030   |    1.0000      1.3280
                           0.3900      0.6540   |    1.0820      1.3980
                           0.4190      0.7110   |    1.1670      1.4690
                           0.4450      0.7680   |    1.2550      1.5390
                           0.4700      0.8260   |    1.3460      1.6090
                           0.4960      0.8830   |    1.9470      1.9930
                           0.6450      0.9400   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037     5.918      6.00      64.76
   OUTFLOW: ID= 1 ( 70150)     25.037     0.674      6.58      64.75
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.38
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.9703

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  --------------------------
  | Junction Command(70151) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.76         3.40
      Dep. Storage     (mm)=       2.00         6.50
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     307.19        41.00
      Mannings n            =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      95.56        58.46
                  over (min)        5.00        10.00
      Storage Coeff.  (min)=       3.96 (ii)    8.39 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.24         0.12
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.78         0.41          3.192 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
      RUNOFF VOLUME    (mm)=      70.52        33.47         61.26
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.46          0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.2230      0.3310
                           0.0580      0.0840   |    0.2500      0.3590
                           0.0780      0.1040   |    0.2790      0.3870
                           0.0930      0.1240   |    0.3090      0.4160
                           0.1060      0.1440   |    0.3750      0.4780
                           0.1180      0.1640   |    0.4110      0.5120
                           0.1280      0.1840   |    0.4470      0.5450
                           0.1590      0.2550   |    0.5250      0.6130
                           0.1770      0.2790   |    0.7390      0.9130
                           0.1990      0.3030   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
```

```
    INFLOW : ID= 2 ( 40730)     14.155      3.192      6.00      61.26
    OUTFLOW: ID= 1 ( 70160)     14.155      0.403      6.50      61.23
    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.64
                    TIME SHIFT OF PEAK FLOW         (min)= 30.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.5060
```

Junction Command(70161)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 3(70160)	0.00	0.00	0.00	0.00
OUTFLOW: ID= 2(70161)	0.00	0.00	0.00	0.00

ADD HYD (50730)|				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50710):	288.15	12.483	6.17	53.24
+ ID2= 2 (70150):	25.04	0.674	6.58	64.75
ID = 3 (50730):	313.19	13.061	6.17	54.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50730)|				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

```
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
```

ID1= 3 (50730):	313.19	13.061	6.17	54.16
+ ID2= 2 (70151):	0.00	0.000	0.00	0.00
ID = 1 (50730):	313.19	13.061	6.17	54.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50730)|				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50730):	313.19	13.061	6.17	54.16
+ ID2= 2 (70160):	14.15	0.403	6.50	61.23
ID = 3 (50730):	327.35	13.441	6.17	54.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50730)|				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

```
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
```

ID1= 3 (50730):	327.35	13.441	6.17	54.47
+ ID2= 2 (70161):	0.00	0.000	0.00	0.00
ID = 1 (50730):	327.35	13.441	6.17	54.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60730)|

IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

Distance	Elevation	Manning	
0.00	96.28	0.0450	
9.00	95.39	0.0450	
12.00	94.87	0.0450	
15.00	94.17	0.0450	
18.00	93.95	0.0450	
21.00	94.01	0.0450	
24.00	93.92	0.0450	
27.00	93.98	0.0450 /0.0350	Main Channel
30.00	93.33	0.0350	Main Channel
32.00	93.73	0.0350 /0.0450	Main Channel
34.00	94.58	0.0450	
35.00	95.06	0.0450	
40.00	95.32	0.0450	
45.00	96.12	0.0450	

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	93.46	.164E+03	0.0	0.36	89.51
0.26	93.60	.654E+03	0.2	0.57	56.39
0.40	93.73	.147E+04	0.6	0.75	43.03
0.55	93.88	.274E+04	1.4	0.99	32.63
0.70	94.03	.550E+04	2.8	1.00	32.28
0.85	94.18	.104E+05	5.8	1.08	29.94
1.00	94.33	.159E+05	10.1	1.24	26.04
1.15	94.48	.216E+05	15.6	1.41	22.97
1.29	94.63	.275E+05	22.2	1.57	20.64
1.44	94.78	.338E+05	29.9	1.72	18.84
1.59	94.93	.404E+05	38.6	1.86	17.44
1.74	95.08	.473E+05	48.0	1.97	16.40
1.89	95.23	.549E+05	58.1	2.05	15.76
2.04	95.38	.637E+05	70.1	2.14	15.14
2.19	95.53	.731E+05	83.0	2.21	14.67
2.34	95.68	.833E+05	97.5	2.27	14.23
2.49	95.83	.941E+05	113.5	2.34	13.82
2.64	95.98	.106E+06	131.2	2.41	13.42
2.79	96.13	.118E+06	150.7	2.48	13.05

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
	<---- hydrograph ---->				<-pipe / channel->	
INFLOW : ID= 2 (50730)	327.35	13.44	6.17	54.47	1.09	1.34
OUTFLOW: ID= 1 (60730)	327.35	9.97	6.58	54.47	0.99	1.23

CALIB |
STANDHYD (40770)| Area (ha)= 69.43
ID= 1 DT= 5.0 min | Total Imp(%)= 81.00 Dir. Conn.(%)= 80.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	56.24	13.19	
Dep. Storage (mm)=	2.00	5.50	
Average Slope (%)=	1.70	1.70	
Length (m)=	680.34	43.00	
Mannings n =	0.015	0.270	
Max.Eff.Inten.(mm/hr)=	95.56	61.17	
over (min)	10.00	15.00	
Storage Coeff. (min)=	7.64 (ii)	12.28 (ii)	
Unit Hyd. Tpeak (min)=	10.00	15.00	
Unit Hyd. peak (cms)=	0.13	0.09	
			TOTALS
PEAK FLOW (cms)=	12.58	1.39	13.789 (iii)
TIME TO PEAK (hrs)=	6.00	6.08	6.00
RUNOFF VOLUME (mm)=	70.52	34.96	63.41
TOTAL RAINFALL (mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT =	0.97	0.48	0.87

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(70170)|	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
OVERFLOW IS ON				
IN= 2---> OUT= 1 |				
DT= 5.0 min |	0.0000	0.0000	3.6700	4.7800
	0.2600	1.6200	8.6400	6.0000
	1.4500	2.7100	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (40770)	69.429	13.789	6.00	63.41
OUTFLOW: ID= 1 (70170)	69.429	1.663	6.75	63.38
OVERFLOW:ID= 3 (0003)	0.000	0.000	0.00	0.00

```
                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.06
                    TIME SHIFT OF PEAK FLOW         (min)= 45.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  2.9114
```

Junction Command(70171)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 3(70170)	0.00	0.00	0.00	0.00
OUTFLOW: ID= 2(70171)	0.00	0.00	0.00	0.00

ADD HYD (50770)|				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (60730):	327.35	9.971	6.58	54.47
+ ID2= 2 (70170):	69.43	1.663	6.75	63.38
ID = 3 (50770):	396.77	11.619	6.58	56.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50770)|				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

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*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
```

ID1= 3 (50770):	396.77	11.619	6.58	56.03
+ ID2= 2 (70171):	0.00	0.000	0.00	0.00
ID = 1 (50770):	396.77	11.619	6.58	56.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60770)|

IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

Distance	Elevation	Manning	
0.00	92.38	0.0450	
3.00	90.34	0.0450	
6.00	89.94	0.0450	
9.00	89.83	0.0450	
12.00	89.80	0.0450	
15.00	89.72	0.0450	
18.00	89.58	0.0450 /0.0350	Main Channel
21.00	89.15	0.0350	Main Channel
24.00	89.82	0.0350 /0.0450	Main Channel
27.00	89.76	0.0450	
30.00	89.78	0.0450	
33.00	89.79	0.0450	
36.00	89.80	0.0450	
39.00	89.72	0.0450	
42.00	90.35	0.0450	
45.00	91.36	0.0450	
48.00	92.10	0.0450	
51.00	92.21	0.0450	
54.00	92.34	0.0450	
56.00	92.35	0.0450	

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.15	89.29	.298E+02	0.0	0.31	13.27
0.29	89.44	.119E+03	0.2	0.50	8.36
0.44	89.58	.268E+03	0.7	0.65	6.38
0.61	89.76	.588E+03	1.9	0.79	5.25
0.78	89.93	.179E+04	5.1	0.71	5.86
0.96	90.10	.329E+04	11.4	0.87	4.79
1.13	90.27	.489E+04	20.2	1.03	4.03
1.30	90.45	.656E+04	31.5	1.19	3.47
1.47	90.62	.828E+04	45.0	1.35	3.06
1.65	90.79	.100E+05	60.5	1.50	2.76
1.82	90.97	.118E+05	77.9	1.64	2.53
1.99	91.14	.136E+05	97.1	1.77	2.34
2.17	91.31	.155E+05	118.1	1.90	2.18
2.34	91.48	.173E+05	140.6	2.02	2.06
2.51	91.66	.193E+05	164.7	2.13	1.95
2.68	91.83	.212E+05	190.5	2.23	1.86
2.86	92.00	.232E+05	218.0	2.33	1.78
3.03	92.18	.253E+05	242.7	2.39	1.74
3.20	92.35	.275E+05	262.6	2.37	1.75

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
	<---- hydrograph ---->				<-pipe / channel->	
INFLOW : ID= 2 (50770)	396.77	11.62	6.58	56.03	0.96	0.87
OUTFLOW: ID= 1 (60770)	396.77	11.59	6.67	56.03	0.96	0.87

CALIB |
STANDHYD (40780)| Area (ha)= 24.57
ID= 1 DT= 5.0 min | Total Imp(%)= 52.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	12.78	11.79	
Dep. Storage (mm)=	2.00	8.70	
Average Slope (%)=	1.50	1.50	
Length (m)=	404.74	43.00	
Mannings n =	0.015	0.330	
Max.Eff.Inten.(mm/hr)=	95.56	51.97	
over (min)	5.00	20.00	
Storage Coeff. (min)=	5.81 (ii)	18.14 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.20	0.06	
			TOTALS
PEAK FLOW (cms)=	3.10	0.90	3.706 (iii)
TIME TO PEAK (hrs)=	6.00	6.17	6.00
RUNOFF VOLUME (mm)=	70.52	31.54	51.03
TOTAL RAINFALL (mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT =	0.97	0.43	0.70

```
        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.6    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40780):    24.57   3.706     6.00    51.03
      + ID2= 2 ( 60770):   396.77  11.586     6.67    56.03
        ================================================
        ID = 3 ( 50780):   421.35  12.309     6.58    55.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      95.56        59.91
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.46 (ii)   16.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.33         0.26          1.514 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      70.52        35.36          57.44
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.49           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      95.56        54.94
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       3.71 (ii)    8.01 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.25         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.22         0.06          1.276 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      70.52        31.79          66.72
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.44           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40790):     8.18   1.514     6.00    57.44
      + ID2= 2 ( 40800):     5.15   1.276     6.00    66.72
        ================================================
        ID = 3 ( 50795):    13.33   2.790     6.00    61.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |    (cms)     (ha.m.)
                         0.0000      0.0000   |    0.7780      0.6570
                         0.0040      0.0150   |    1.1550      0.7720
                         0.0090      0.0810   |    1.5780      0.8930
                         0.0120      0.1550   |    1.9240      0.9870
                         0.0140      0.2370   |    2.4190      1.1190
                         0.0160      0.3260   |    2.9510      1.2560
                         0.0620      0.3720   |    3.5980      1.3270
                         0.2560      0.4700   |    4.5570      1.3990
                         0.5310      0.5740   |    5.7230      1.4730

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)  13.332     2.790      6.00      61.03
   OUTFLOW: ID= 1 ( 70180)  13.332     0.397      6.58      60.95
   OVERFLOW:ID= 3 (  0003)   0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.22
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5239

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(70181) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41         2.16
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250

     Max.Eff.Inten.(mm/hr)=      95.56        76.99
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.37 (ii)   11.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.33         0.31          0.602 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      71.52        44.91          54.14
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.99         0.62           0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40805):     3.57   0.602     6.00    54.14
      + ID2= 2 ( 70180):    13.33   0.397     6.58    60.95
        ================================================
        ID = 3 ( 50790):    16.90   0.743     6.00    59.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50790):    16.90   0.743     6.00    59.51
      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50790):    16.90   0.743     6.00    59.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50780):   421.35  12.309     6.58    55.74
      + ID2= 2 ( 50790):    16.90   0.743     6.00    59.51
        ================================================
        ID = 3 ( 50800):   438.25  12.833     6.50    55.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         88.54        0.0450
                   3.00         88.18        0.0450
                   6.00         87.54        0.0450
                   9.00         87.44        0.0450
                  12.00         87.13        0.0450
                  15.00         87.23        0.0450
                  18.00         87.18        0.0450
                  21.00         86.49    0.0450 /0.0350  Main Channel
                  24.00         85.82        0.0350      Main Channel
                  27.00         86.44    0.0350 /0.0450  Main Channel
                  30.00         87.18        0.0450
                  33.00         87.16        0.0450
                  36.00         87.25        0.0450
                  39.00         87.46        0.0450
                  42.00         87.70        0.0450
                  45.00         87.80        0.0450
                  48.00         88.00        0.0450
                  49.00         88.12        0.0450
                  50.00         88.23        0.0450
                  52.00         88.59        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12    85.95    .779E+02        0.0         0.37      48.75
        0.25    86.07    .312E+03        0.2         0.59      30.71
        0.37    86.19    .701E+03        0.5         0.77      23.44
        0.49    86.32    .125E+04        1.1         0.94      19.35
        0.62    86.44    .195E+04        1.9         1.09      16.67
        0.77    86.59    .299E+04        3.8         1.36      13.29
        0.92    86.74    .424E+04        6.2         1.59      11.42
        1.07    86.89    .570E+04        9.3         1.77      10.25
        1.22    87.04    .736E+04       13.0         1.92       9.44
        1.37    87.19    .938E+04       16.8         1.94       9.33
        1.52    87.34    .134E+05       22.9         1.86       9.74
        1.66    87.49    .182E+05       31.1         1.86       9.72
        1.81    87.64    .237E+05       41.6         1.91       9.51
        1.96    87.79    .298E+05       53.9         1.96       9.22
        2.11    87.94    .365E+05       68.9         2.05       8.84
        2.26    88.09    .437E+05       86.5         2.15       8.43
        2.41    88.24    .513E+05      106.2         2.25       8.04
        2.56    88.39    .592E+05      128.2         2.36       7.69
        2.71    88.54    .674E+05      152.5         2.46       7.36

                                      <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50800)  438.25    12.83    6.50  55.88      1.21       1.91
   OUTFLOW: ID= 1 ( 60800)  438.25    12.58    6.75  55.88      1.20       1.90


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40820)|   Area    (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98        11.23
     Dep. Storage     (mm)=       2.00         9.57
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     307.74        44.00
     Mannings n           =      0.015        0.390

     Max.Eff.Inten.(mm/hr)=      95.56        48.33
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.33 (ii)   16.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.48         0.82          1.028 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      70.52        28.00          33.52
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.39           0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  73.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50820)|
```

```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40820):    14.21   1.028     6.00    33.52
     + ID2= 2 ( 60800):   438.25  12.576     6.75    55.88
       ================================================
       ID = 3 ( 50820):   452.45  12.935     6.67    55.18

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50500):  1213.24  45.858     6.92    50.24
     + ID2= 2 ( 50820):   452.45  12.935     6.67    55.18
       ================================================
       ID = 3 ( 50830):  1665.70  58.433     6.92    51.58

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
|------------------|
```

<------ DATA FOR SECTION (1.1) ------>		
Distance	Elevation	Manning
0.00	82.12	0.0450
20.00	81.53	0.0450
24.00	81.26	0.0450
28.00	81.27	0.0450
32.00	80.34	0.0450 /0.0350 Main Channel
36.00	79.95	0.0350 Main Channel
40.00	80.78	0.0450
44.00	81.45	0.0450
48.00	81.53	0.0450
52.00	81.49	0.0450
56.00	81.51	0.0450
60.00	81.58	0.0450
64.00	81.58	0.0450
68.00	81.61	0.0450
72.00	81.75	0.0450
80.00	82.07	0.0450

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	80.05	.555E+01	0.0	0.24	5.45
0.19	80.14	.222E+02	0.1	0.38	3.43
0.29	80.24	.499E+02	0.3	0.50	2.62
0.39	80.34	.888E+02	0.7	0.60	2.16
0.50	80.45	.146E+03	1.4	0.77	1.68
0.62	80.57	.213E+03	2.5	0.91	1.43
0.73	80.68	.290E+03	3.8	1.02	1.27
0.85	80.80	.375E+03	5.4	1.13	1.15
0.96	80.91	.471E+03	7.6	1.26	1.03
1.08	81.03	.578E+03	10.1	1.37	0.95
1.19	81.14	.695E+03	13.0	1.46	0.89
1.31	81.26	.823E+03	16.2	1.53	0.85
1.43	81.37	.100E+04	19.7	1.53	0.85
1.54	81.49	.121E+04	24.1	1.56	0.84
1.66	81.60	.155E+04	29.0	1.46	0.89
1.77	81.72	.204E+04	36.4	1.39	0.93
1.89	81.84	.259E+04	45.6	1.38	0.95
2.00	81.95	.320E+04	56.7	1.38	0.94
2.12	82.07	.387E+04	69.6	1.40	0.93

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50830)	1665.70	58.43	6.92	51.58	2.02	1.39
OUTFLOW: ID= 1 (60830)	1665.70	58.49	6.92	51.58	2.01	1.38

```
| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
|------------------|
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	30.36	15.15
Dep. Storage	(mm)=	2.00	5.54
Average Slope	(%)=	1.30	1.30
Length	(m)=	550.83	40.00
Mannings n	=	0.015	0.270
Max.Eff.Inten.	(mm/hr)=	95.56	91.06
over	(min)	5.00	20.00
Storage Coeff.	(min)=	7.29 (ii)	16.03 (ii)
Unit Hyd. Tpeak	(min)=	5.00	20.00
Unit Hyd. peak	(cms)=	0.17	0.06
			TOTALS
PEAK FLOW	(cms)=	5.90	2.06	7.379 (iii)
TIME TO PEAK	(hrs)=	6.00	6.17	6.00
RUNOFF VOLUME	(mm)=	70.52	39.73	56.19
TOTAL RAINFALL	(mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT	=	0.97	0.55	0.77

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
|------------------|
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.45	1.59
Dep. Storage	(mm)=	2.00	9.61
Average Slope	(%)=	3.20	3.20
Length	(m)=	116.69	69.00
Mannings n	=	0.015	0.370
Max.Eff.Inten.	(mm/hr)=	95.56	50.28
over	(min)	5.00	20.00
Storage Coeff.	(min)=	2.19 (ii)	16.35 (ii)
Unit Hyd. Tpeak	(min)=	5.00	20.00
Unit Hyd. peak	(cms)=	0.31	0.06
			TOTALS
PEAK FLOW	(cms)=	0.08	0.12	0.161 (iii)
TIME TO PEAK	(hrs)=	6.00	6.17	6.00
RUNOFF VOLUME	(mm)=	70.52	29.04	35.03
TOTAL RAINFALL	(mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT	=	0.97	0.40	0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40830):    45.51   7.379     6.00    56.19
     + ID2= 2 ( 40840):     2.04   0.161     6.00    35.03
       ================================================
       ID = 3 ( 50840):    47.56   7.540     6.00    55.28
```

```
    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50840):    47.56   7.540     6.00    55.28
     + ID2= 2 ( 60830):  1665.70  58.490     6.92    51.58
       ================================================
       ID = 1 ( 50840):  1713.25  59.451     6.83    51.68

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
|------------------|
```

<------ DATA FOR SECTION (1.1) ------>		
Distance	Elevation	Manning	
0.00	82.18	0.0450	
32.00	79.04	0.0450	
40.00	78.76	0.0450	
48.00	78.58	0.0450	
56.00	78.21	0.0450	
64.00	76.89	0.0350	Main Channel
72.00	78.08	0.0450	
80.00	79.44	0.0450	
88.00	80.28	0.0450	
96.00	80.92	0.0450	
104.00	81.29	0.0450	
112.00	81.62	0.0450	
120.00	81.76	0.0450	
128.00	81.81	0.0450	
140.00	82.02	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.27	77.16	.320E+03	0.2	0.48	24.00
0.54	77.43	.128E+04	1.4	0.75	15.12
0.81	77.70	.288E+04	4.2	0.99	11.54
1.08	77.97	.512E+04	9.0	1.20	9.53
1.35	78.24	.799E+04	16.6	1.42	8.02
1.62	78.51	.119E+05	26.9	1.54	7.40
1.89	78.78	.176E+05	41.0	1.59	7.15
2.16	79.05	.252E+05	62.9	1.71	6.68
2.43	79.32	.341E+05	93.9	1.89	6.05
2.70	79.59	.438E+05	131.1	2.05	5.56
2.97	79.86	.544E+05	175.1	2.20	5.18
3.24	80.13	.660E+05	226.4	2.35	4.86
3.51	80.40	.787E+05	284.9	2.48	4.60
3.77	80.67	.924E+05	351.1	2.60	4.39
4.04	80.94	.107E+06	425.7	2.72	4.20
4.31	81.21	.124E+06	507.1	2.81	4.06
4.58	81.48	.141E+06	598.4	2.90	3.94
4.85	81.75	.161E+06	695.9	2.96	3.86
5.12	82.02	.185E+06	800.9	2.97	3.85

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50840)	1713.25	59.45	6.83	51.68	2.11	1.69
OUTFLOW: ID= 1 (60840)	1713.25	59.19	6.92	51.68	2.11	1.69

```
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
|------------------|
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.14	18.19
Dep. Storage	(mm)=	2.00	7.29
Average Slope	(%)=	2.00	2.00
Length	(m)=	418.93	142.00
Mannings n	=	0.015	0.310
Max.Eff.Inten.	(mm/hr)=	95.56	34.31
over	(min)	5.00	35.00
Storage Coeff.	(min)=	5.44 (ii)	31.78 (ii)
Unit Hyd. Tpeak	(min)=	5.00	35.00
Unit Hyd. peak	(cms)=	0.20	0.03
			TOTALS
PEAK FLOW	(cms)=	1.65	1.03	2.078 (iii)
TIME TO PEAK	(hrs)=	6.00	6.42	6.00
RUNOFF VOLUME	(mm)=	70.52	32.53	41.88
TOTAL RAINFALL	(mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT	=	0.97	0.45	0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40850):    26.33   2.078     6.00    41.88
     + ID2= 2 ( 60840):  1713.25  59.190     6.92    51.68
       ================================================
       ID = 3 ( 50850):  1739.58  59.962     6.92    51.54

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
|------------------|
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.77	35.37
Dep. Storage	(mm)=	2.00	8.79
Average Slope	(%)=	1.30	1.30
Length	(m)=	611.77	120.00
Mannings n	=	0.015	0.330
Max.Eff.Inten.	(mm/hr)=	95.56	33.47
over	(min)	10.00	40.00
Storage Coeff.	(min)=	7.77 (ii)	36.18 (ii)
Unit Hyd. Tpeak	(min)=	10.00	40.00
Unit Hyd. peak	(cms)=	0.13	0.03
			TOTALS
PEAK FLOW	(cms)=	4.30	1.78	4.936 (iii)
TIME TO PEAK	(hrs)=	6.00	6.50	6.00
RUNOFF VOLUME	(mm)=	70.52	32.86	45.66
TOTAL RAINFALL	(mm)=	72.52	72.52	72.52
RUNOFF COEFFICIENT	=	0.97	0.45	0.63

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
|------------------|
```

<------ DATA FOR SECTION (1.1) ------>		
Distance	Elevation	Manning
0.00	85.55	0.0450
24.00	85.23	0.0450
28.00	85.17	0.0450

```
                  32.00         85.07        0.0450
                  36.00         84.96        0.0350      Main Channel
                  40.00         84.96        0.0350      Main Channel
                  44.00         85.00    0.0350 /0.0450  Main Channel
                  48.00         85.03        0.0450
                  52.00         85.18        0.0450
                  56.00         85.22        0.0450
                  60.00         85.31        0.0450
                  64.00         85.33        0.0450
                  68.00         85.38        0.0450
                  80.00         85.59        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   84.96    .992E+01        0.0         0.05     238.32
        0.04   84.99    .159E+03        0.0         0.21      57.53
        0.07   85.03    .408E+03        0.2         0.32      38.32
        0.10   85.06    .751E+03        0.4         0.40      30.54
        0.13   85.09    .114E+04        0.7         0.47      25.77
        0.16   85.12    .158E+04        1.2         0.53      22.66
        0.19   85.15    .206E+04        1.7         0.59      20.45
        0.22   85.18    .259E+04        2.3         0.64      18.91
        0.25   85.21    .321E+04        3.0         0.67      18.12
        0.29   85.24    .393E+04        3.8         0.70      17.32
        0.32   85.27    .473E+04        4.8         0.73      16.56
        0.35   85.30    .562E+04        5.9         0.76      15.89
        0.38   85.34    .663E+04        7.0         0.77      15.69
        0.41   85.37    .777E+04        8.5         0.80      15.20
        0.44   85.40    .902E+04       10.2         0.82      14.69
        0.47   85.43    .104E+05       12.2         0.85      14.19
        0.50   85.46    .118E+05       14.3         0.88      13.73
        0.53   85.49    .133E+05       16.7         0.91      13.31
        0.56   85.52    .150E+05       19.3         0.94      12.91

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40880)   56.14     4.94    6.00  45.66      0.32      0.73
   OUTFLOW: ID= 1 ( 60880)   56.14     3.41    6.17  45.64      0.27      0.68


--------------------------------------------------------------------------------
--------------------
| ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
| DT=  5.0 min     |     Length        (m)= 888.03
--------------------     Slope       (m/m)=  0.004
                         Manning n         =  0.013

      <----------------- TRAVEL TIME TABLE ------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)      (cu.m.)      (cms)        (m/s)        min
         0.10     .213E+03        0.2          0.93       15.91
         0.20     .426E+03        0.7          1.41       10.53
         0.30     .639E+03        1.3          1.76        8.42
         0.40     .853E+03        2.0          2.04        7.25
         0.50     .107E+04        2.7          2.27        6.51
         0.60     .128E+04        3.6          2.47        5.99
         0.70     .149E+04        4.4          2.64        5.60
         0.80     .171E+04        5.4          2.79        5.30
         0.90     .192E+04        6.3          2.92        5.06
         1.00     .213E+04        7.3          3.04        4.87
         1.10     .234E+04        8.3          3.15        4.71
         1.20     .256E+04        9.3          3.24        4.57
         1.30     .277E+04       10.4          3.33        4.45
         1.40     .298E+04       11.4          3.40        4.35
         1.50     .320E+04       12.5          3.48        4.26
         1.60     .341E+04       13.6          3.54        4.18
         1.70     .362E+04       14.7          3.60        4.11
         1.80     .384E+04       15.8          3.66        4.05
         1.90     .405E+04       16.9          3.71        3.99
                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60880)   56.14     3.41    6.17  45.64      0.58      2.43
   OUTFLOW: ID= 1 ( 80880)   56.14     3.28    6.25  45.64      0.57      2.40


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area     (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      18.24         23.47
     Dep. Storage     (mm)=       2.00          8.20
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     527.32         85.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=      95.56         41.94
                   over (min)       5.00         35.00
     Storage Coeff.  (min)=       7.47 (ii)    30.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00         35.00
     Unit Hyd. peak  (cms)=       0.17          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.31          1.46          3.917 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.42           6.00
     RUNOFF VOLUME    (mm)=      70.52         32.07          44.70
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.44           0.62

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  75.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area     (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.41          5.15
     Dep. Storage     (mm)=       1.00          7.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     300.67         43.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=      95.56         86.49
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       5.49 (ii)    14.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.20          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.65          0.73          2.283 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      71.52         38.10          54.14
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.99          0.53           0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------      (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  13.56      2.28      6.00   54.14

      ==============================================
     MAJOR SYS.(ID= 2):   2.03      1.32      6.00   54.14
     MINOR SYS.(ID= 3):  11.53      0.96      5.83   54.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71    3.917     6.00    44.70
      + ID2= 2 ( 50850):  1739.58   59.962     6.92    51.54
        ==============================================
        ID = 3 ( 50890):  1781.29   61.120     6.92    51.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1781.29   61.120     6.92    51.38
      + ID2= 2 ( 80880):    56.14    3.283     6.25    45.64
        ==============================================
        ID = 1 ( 50890):  1837.43   63.386     6.92    51.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  1837.43   63.386     6.92    51.20
      + ID2= 2 ( 90020):    11.53    0.960     5.83    54.14
        ==============================================
        ID = 3 ( 50890):  1848.95   63.628     6.92    51.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         79.05        0.0450
                   2.00         78.40        0.0450
                   4.00         77.75        0.0450
                   6.00         77.16        0.0450
                   8.00         76.78        0.0450
                  10.00         76.65        0.0450
                  12.00         76.60        0.0450
                  14.00         76.58        0.0450
                  16.00         76.08        0.0450
                  18.00         75.49    0.0450 /0.0350  Main Channel
                  20.00         75.46        0.0350      Main Channel
                  22.00         75.52    0.0350 /0.0450  Main Channel
                  24.00         76.15        0.0450
                  26.00         76.44        0.0450
                  28.00         76.56        0.0450
                  30.00         76.68        0.0450
                  32.00         76.86        0.0450
                  34.00         77.01        0.0450
                  36.00         77.10        0.0450
                  40.00         79.16        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.03   75.49    .127E+02        0.0         0.14      32.03
        0.22   75.68    .231E+03        0.6         0.69       6.29
        0.40   75.87    .510E+03        2.0         1.01       4.28
        0.59   76.05    .849E+03        4.1         1.25       3.45
        0.78   76.24    .125E+04        6.9         1.43       3.02
        0.97   76.43    .175E+04       10.6         1.57       2.75
        1.15   76.62    .240E+04       14.6         1.57       2.75
        1.34   76.80    .343E+04       21.1         1.60       2.71
        1.53   76.99    .465E+04       30.1         1.68       2.58
        1.71   77.18    .605E+04       41.3         1.77       2.44
        1.90   77.36    .754E+04       55.7         1.92       2.26
        2.09   77.55    .908E+04       72.1         2.06       2.10
        2.27   77.74    .107E+05       90.6         2.20       1.96
        2.46   77.92    .123E+05      111.1         2.34       1.84
        2.65   78.11    .140E+05      133.5         2.48       1.74
        2.84   78.30    .157E+05      157.9         2.61       1.66
        3.02   78.49    .175E+05      184.1         2.73       1.58
        3.21   78.67    .193E+05      212.1         2.85       1.52
        3.40   78.86    .211E+05      242.1         2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1848.95    63.63    6.92  51.22      1.99      1.98
   OUTFLOW: ID= 1 ( 60900) 1848.95    63.64    6.92  51.22      1.99      1.98


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area     (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77          2.15
     Dep. Storage     (mm)=       2.00          7.07
     Average Slope     (%)=       1.70          1.70
     Length            (m)=     214.73         44.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      95.56        102.36
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       3.82 (ii)    12.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.25          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.96          0.39          1.301 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      70.52         40.92          56.58
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.56           0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92    1.301     6.00    56.58
      + ID2= 2 ( 60900):  1848.95   63.635     6.92    51.22
        ==============================================
        ID = 3 ( 50910):  1855.87   63.753     6.92    51.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15
```

```
      Unit Hyd Qpeak  (cms)=   0.048

      PEAK FLOW       (cms)=   0.027 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  40.779
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.562

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.36

      Unit Hyd Qpeak  (cms)=   1.897

      PEAK FLOW       (cms)=   1.484 (i)
      TIME TO PEAK    (hrs)=   6.250
      RUNOFF VOLUME    (mm)=  41.009
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

      Unit Hyd Qpeak  (cms)=   0.088

      PEAK FLOW       (cms)=   0.055 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  40.921
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.564

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    17.88   1.484     6.25    41.01
      + ID2= 2 (******):     0.44   0.055     6.08    40.92
        ================================================
        ID = 3 (******):    18.32   1.519     6.25    41.01

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.070

      PEAK FLOW       (cms)=   0.042 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  40.898
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.564

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

      Unit Hyd Qpeak  (cms)=   1.207

      PEAK FLOW       (cms)=   0.843 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  40.984
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.33   0.042     6.08    40.90
      + ID2= 2 (******):     7.90   0.843     6.08    40.98
        ================================================
        ID = 3 (******):     8.23   0.885     6.08    40.98

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.19   0.027     6.00    40.78
      + ID2= 2 (******):    18.32   1.519     6.25    41.01
        ================================================
        ID = 3 (******):    18.51   1.536     6.17    41.00

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    18.51   1.536     6.17    41.00
      + ID2= 2 (******):     8.23   0.885     6.08    40.98
        ================================================
        ID = 1 (******):    26.74   2.386     6.17    41.00

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.79         0.06
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       1.70         1.00
      Length            (m)=      78.30         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      95.56        67.47
                    over (min)       5.00         5.00
      Storage Coeff.  (min)=       1.92 (ii)    1.92 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.31         0.31
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.54         0.01          1.548 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      70.52        41.02          70.22
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.57           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85   1.548     6.00    70.22
      + ID2= 2 (******):     0.00   0.000     6.58    49.40
        ================================================
        ID = 3 (******):     5.85   1.548     6.00    70.22

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.11   0.142     6.00    64.53
      + ID2= 2 (******):     1.15   0.348     6.58    49.40
        ================================================
        ID = 3 (******):     1.26   0.348     6.58    50.69

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     1.26   0.348     6.58    50.69
      + ID2= 2 (******):     5.85   1.548     6.00    70.22
        ================================================
        ID = 1 (******):     7.11   1.690     6.00    66.76

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        426.51        0.0450
                    0.98        426.14        0.0350      Main Channel
                    2.04        426.14        0.0350      Main Channel
                   20.51        426.51        0.0350      Main Channel

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)      (cu.m.)       (cms)        (m/s)       (min)
         0.00   426.14    .579E+00         0.0          0.03      191.52
         0.02   426.16    .114E+02         0.0          0.14       39.52
         0.04   426.18    .285E+02         0.0          0.19       27.56
         0.06   426.20    .520E+02         0.0          0.24       22.17
         0.08   426.22    .818E+02         0.1          0.28       18.92
         0.10   426.24    .118E+03         0.1          0.32       16.68
         0.12   426.26    .161E+03         0.2          0.36       15.02
         0.14   426.27    .210E+03         0.3          0.39       13.73
         0.16   426.29    .265E+03         0.3          0.42       12.69
         0.18   426.31    .326E+03         0.5          0.45       11.82
         0.20   426.33    .394E+03         0.6          0.48       11.10
         0.22   426.35    .469E+03         0.7          0.51       10.47
         0.24   426.37    .549E+03         0.9          0.54        9.93
         0.26   426.39    .637E+03         1.1          0.56        9.46
         0.28   426.41    .730E+03         1.3          0.59        9.03
         0.30   426.43    .830E+03         1.6          0.62        8.65
         0.32   426.45    .936E+03         1.9          0.64        8.31
         0.34   426.47    .105E+04         2.2          0.67        8.01
         0.35   426.49    .117E+04         2.5          0.69        7.72

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)     7.11     1.69    6.00  66.76       0.30       0.62
   OUTFLOW: ID= 1 (******)     7.11     1.42    6.00  66.76       0.28       0.60


--------------------------------------------------------------------------------
--------------------
| ROUTEPIPE(******)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
| DT=  5.0 min     |     Length        (m)= 372.00
--------------------     Slope       (m/m)=  0.004
                         Manning n        =  0.013

      <----------------- TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE     VELOCITY    TRAV.TIME
          (m)      (cu.m.)       (cms)        (m/s)         min
         0.05     .423E+02         0.1          0.58        10.67
         0.09     .846E+02         0.2          0.90         6.89
         0.14     .127E+03         0.4          1.15         5.39
         0.19     .169E+03         0.6          1.36         4.55
         0.24     .211E+03         0.9          1.55         4.01
         0.28     .254E+03         1.2          1.71         3.63
         0.33     .296E+03         1.5          1.85         3.34
         0.38     .338E+03         1.8          1.99         3.12
         0.43     .381E+03         2.2          2.11         2.94
         0.47     .423E+03         2.5          2.22         2.80
         0.52     .465E+03         2.9          2.32         2.67
         0.57     .507E+03         3.3          2.41         2.57
         0.62     .550E+03         3.7          2.50         2.48
         0.66     .592E+03         4.1          2.58         2.40
         0.71     .634E+03         4.5          2.66         2.33
         0.76     .677E+03         5.0          2.73         2.27
         0.81     .719E+03         5.4          2.80         2.21
         0.85     .761E+03         5.9          2.86         2.17
         0.90     .804E+03         6.3          2.92         2.12

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)     4.00     0.85    6.00  64.53       0.23       1.52
   OUTFLOW: ID= 1 (******)     4.00     0.86    6.00  64.53       0.23       1.53


      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.00   0.862     6.00    64.53
      + ID2= 2 (******):    26.74   2.386     6.17    41.00
        ================================================
        ID = 3 (******):    30.74   2.935     6.08    44.06

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    30.74   2.935     6.08    44.06
      + ID2= 2 (******):     7.11   1.416     6.00    66.76
        ================================================
        ID = 1 (******):    37.85   4.174     6.00    48.33

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
```

```
07957>               <------ DATA FOR SECTION (   1.1) ------>
07958>               Distance      Elevation       Manning
07959>                  0.00        418.26        0.0450
07960>                 40.58        417.27        0.0450
07961>                 68.64        416.80        0.0450
07962>                140.74        415.56        0.0450
07963>                163.74        415.03    0.0450 /0.0350  Main Channel
07964>                211.93        413.30        0.0350      Main Channel
07965>                250.43        411.92        0.0350      Main Channel
07966>                258.86        411.77        0.0350      Main Channel
07967>                276.07        411.80        0.0350      Main Channel
07968>                290.03        411.70        0.0350      Main Channel
07969>                294.99        411.74        0.0350      Main Channel
07970>                298.74        411.97        0.0350      Main Channel
07971>                309.80        412.64        0.0350      Main Channel
07972>                321.40        413.39        0.0350      Main Channel
07973>                332.67        415.03    0.0350 /0.0450  Main Channel
07974>                344.47        416.63        0.0450
07975>                360.44        418.31        0.0450
07976>                381.73        419.43        0.0450
07977>                385.80        419.95        0.0450
07978>                389.30        420.75        0.0450
07979>
07980>      <--------------------- TRAVEL TIME TABLE ---------------------->
07981>       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
07982>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
07983>        0.33   412.03    .115E+05       14.5         1.18      13.21
07984>        0.67   412.36    .302E+05       61.5         1.91       8.18
07985>        1.00   412.70    .535E+05      139.9         2.46       6.38
07986>        1.33   413.03    .814E+05      252.5         2.91       5.37
07987>        1.66   413.36    .114E+06      402.0         3.32       4.72
07988>        2.00   413.70    .150E+06      597.3         3.74       4.19
07989>        2.33   414.03    .190E+06      834.3         4.12       3.80
07990>        2.66   414.36    .234E+06     1114.3         4.47       3.50
07991>        2.99   414.69    .281E+06     1439.4         4.80       3.26
07992>        3.33   415.03    .332E+06     1811.8         5.12       3.06
07993>        3.69   415.39    .393E+06     2361.5         5.65       2.77
07994>        4.05   415.75    .459E+06     2978.2         6.10       2.57
07995>        4.41   416.10    .533E+06     3668.2         6.46       2.42
07996>        4.76   416.46    .615E+06     4437.5         6.78       2.31
07997>        5.12   416.82    .705E+06     5290.7         7.05       2.22
07998>        5.48   417.18    .804E+06     6232.2         7.29       2.15
07999>        5.84   417.54    .910E+06     7276.0         7.51       2.08
08000>        6.20   417.90    .102E+07     8417.1         7.74       2.02
08001>        6.56   418.26    .114E+07     9654.5         7.95       1.97
08002>
08003>                                    <---- hydrograph ---->   <-pipe / channel->
08004>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
08005>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
08006>    INFLOW : ID= 2 (******)    37.85     4.17    6.00  48.33      0.10      1.18
08007>    OUTFLOW: ID= 1 (******)    37.85     3.13    6.25  48.33      0.07      1.18
08008>
08009>
08010>
08011> ---------------------------------------------------------------------------
08012> --------------------
08013> | CALIB            |
08014> | NASHYD   (******)|   Area    (ha)=  31.02   Curve Number   (CN)= 85.0
08015> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
08016> --------------------   U.H. Tp(hrs)=   0.55
08017>
08018>      Unit Hyd Qpeak  (cms)=   2.154
08019>
08020>      PEAK FLOW       (cms)=   1.909 (i)
08021>      TIME TO PEAK    (hrs)=   6.417
08022>      RUNOFF VOLUME    (mm)=  41.016
08023>      TOTAL RAINFALL   (mm)=  72.519
08024>      RUNOFF COEFFICIENT   =   0.566
08025>
08026>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08027>
08028> ---------------------------------------------------------------------------
08029>
08030> --------------------
08031> | ADD HYD  (******)|
08032> |   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
08033> --------------------         (ha)    (cms)    (hrs)     (mm)
08034>         ID1= 1 (******):    31.02   1.909     6.42    41.02
08035>       + ID2= 2 (******):    37.85   3.133     6.25    48.33
08036>         ================================================
08037>         ID = 3 (******):    68.87   4.898     6.33    45.03
08038>
08039>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08040> ---------------------------------------------------------------------------
08041> ===========================================================================
08042>
08043>        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
08044>        V    V   I    SS     U   U   A A   L
08045>         V  V    I     SS    U   U  AAAAA  L
08046>         V  V    I      SS   U   U  A   A  L
08047>          VV     I    SSSSS  UUUUU  A   A  LLLLL
08048>
08049>         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
08050>        O   O    T      T    H   H   Y Y   MM MM  O   O
08051>        O   O    T      T    H   H    Y    M M M  O   O
08052>         OOO     T      T    H   H    Y    M   M   OOO
08053> Developed and Distributed by Smart City Water Inc
08054> Copyright 2007 - 2022 Smart City Water Inc
08055> All rights reserved.
08056>
08057>
08058>                   *****  D E T A I L E D   O U T P U T *****
08059>
08060>
08061>   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
08062>   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
08063>   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
08064>
08065>
08066> DATE: 02/19/2026                          TIME: 02:35:24
08067>
08068> USER:
08069>
08070>
08071>
08072> COMMENTS: _____________________________________________________
08073>
08074>
08075> ---------------------------------------------------------------------------
08076>    ************************************************
08077>    ** SIMULATION : 2 Year 12 hr 5 min SCS Type I **
08078>    ************************************************
08079>
08080>
08081> --------------------
08082> |    READ STORM    |    Filename: C:\Users\DPham\AppD
08083> |                  |              ata\Local\Temp\
08084> |                  |              257afcce-e1cf-4cdb-b646-cb15a9fd682a\5a0ab2af
08085> | Ptotal= 48.07 mm |    Comments: 2 Year 12 hr 5 min SCS Type II CC
08086> --------------------
08087>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
08088>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
08089>                  0.00    1.20 |  3.08    1.92 |  6.17    8.64 |  9.25    1.68
08090>                  0.08    1.20 |  3.17    1.92 |  6.25    8.64 |  9.33    1.68
08091>                  0.17    1.20 |  3.25    1.92 |  6.33    8.64 |  9.42    1.68
08092>                  0.25    1.20 |  3.33    1.92 |  6.42    8.64 |  9.50    1.68
08093>                  0.33    1.20 |  3.42    1.92 |  6.50    3.84 |  9.58    1.68
08094>                  0.42    1.20 |  3.50    1.92 |  6.58    3.84 |  9.67    1.68
08095>                  0.50    1.20 |  3.58    1.92 |  6.67    3.84 |  9.75    1.68
08096>                  0.58    1.20 |  3.67    1.92 |  6.75    3.84 |  9.83    1.68
08097>                  0.67    1.20 |  3.75    1.92 |  6.83    3.84 |  9.92    1.68
08098>                  0.75    1.20 |  3.83    1.92 |  6.92    3.84 | 10.00    0.96
08099>                  0.83    1.20 |  3.92    1.92 |  7.00    2.88 | 10.08    0.96
08100>                  0.92    1.20 |  4.00    2.88 |  7.08    2.88 | 10.17    0.96
08101>                  1.00    1.20 |  4.08    2.88 |  7.17    2.88 | 10.25    0.96
08102>                  1.08    1.20 |  4.17    2.88 |  7.25    2.88 | 10.33    0.96
08103>                  1.17    1.20 |  4.25    2.88 |  7.33    2.88 | 10.42    0.96
08104>                  1.25    1.20 |  4.33    2.88 |  7.42    2.88 | 10.50    0.96
08105>                  1.33    1.20 |  4.42    2.88 |  7.50    2.88 | 10.58    0.96
08106>                  1.42    1.20 |  4.50    3.84 |  7.58    2.88 | 10.67    0.96
08107>                  1.50    1.20 |  4.58    3.84 |  7.67    2.88 | 10.75    0.96
08108>                  1.58    1.20 |  4.67    3.84 |  7.75    2.88 | 10.83    0.96
08109>                  1.67    1.20 |  4.75    3.84 |  7.83    2.88 | 10.92    0.96
08110>                  1.75    1.20 |  4.83    3.84 |  7.92    2.88 | 11.00    0.96
08111>                  1.83    1.20 |  4.92    3.84 |  8.00    1.68 | 11.08    0.96
08112>                  1.92    1.20 |  5.00    5.76 |  8.08    1.68 | 11.17    0.96
08113>                  2.00    1.44 |  5.08    5.76 |  8.17    1.68 | 11.25    0.96
08114>                  2.08    1.44 |  5.17    5.76 |  8.25    1.68 | 11.33    0.96
08115>                  2.17    1.44 |  5.25    5.76 |  8.33    1.68 | 11.42    0.96
08116>                  2.25    1.44 |  5.33    5.76 |  8.42    1.68 | 11.50    0.96
08117>                  2.33    1.44 |  5.42    5.76 |  8.50    1.68 | 11.58    0.96
08118>                  2.42    1.44 |  5.50   23.03 |  8.58    1.68 | 11.67    0.96
08119>                  2.50    1.44 |  5.58   23.03 |  8.67    1.68 | 11.75    0.96
08120>                  2.58    1.44 |  5.67   23.03 |  8.75    1.68 | 11.83    0.96
08121>                  2.67    1.44 |  5.75   63.34 |  8.83    1.68 | 11.92    0.96
08122>                  2.75    1.44 |  5.83   63.34 |  8.92    1.68 | 12.00    0.96
08123>                  2.83    1.44 |  5.92   63.34 |  9.00    1.68 |
08124>                  2.92    1.44 |  6.00    8.64 |  9.08    1.68 |
08125>                  3.00    1.92 |  6.08    8.64 |  9.17    1.68 |
08126>
08127> ---------------------------------------------------------------------------
08128>
08129> --------------------
08130> | CALIB            |
08131> | NASHYD   ( 40010)|   Area    (ha)=  43.09   Curve Number   (CN)= 79.5
08132> |ID= 1 DT= 5.0 min |   Ia      (mm)=   8.41   # of Linear Res.(N)= 3.00
08133> --------------------   U.H. Tp(hrs)=   0.47
08134>
08135>      Unit Hyd Qpeak  (cms)=   3.502
08136>
08137>      PEAK FLOW       (cms)=   1.022 (i)
08138>      TIME TO PEAK    (hrs)=   6.417
08139>      RUNOFF VOLUME    (mm)=  14.957
08140>      TOTAL RAINFALL   (mm)=  48.071
08141>      RUNOFF COEFFICIENT   =   0.311
08142>
08143>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08144>
08145> ---------------------------------------------------------------------------
08146> --------------------
08147> | CALIB            |
08148> | NASHYD   ( 40030)|   Area    (ha)=  54.88   Curve Number   (CN)= 79.4
08149> |ID= 1 DT= 5.0 min |   Ia      (mm)=   8.34   # of Linear Res.(N)= 3.00
08150> --------------------   U.H. Tp(hrs)=   0.46
08151>
08152>      Unit Hyd Qpeak  (cms)=   4.557
08153>
08154>      PEAK FLOW       (cms)=   1.316 (i)
08155>      TIME TO PEAK    (hrs)=   6.417
08156>      RUNOFF VOLUME    (mm)=  14.926
08157>      TOTAL RAINFALL   (mm)=  48.071
08158>      RUNOFF COEFFICIENT   =   0.310
08159>
08160>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08161>
08162> ---------------------------------------------------------------------------
08163>
08164> --------------------
08165> | ADD HYD  ( 50010)|
08166> |   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
08167> --------------------         (ha)    (cms)    (hrs)     (mm)
08168>         ID1= 1 ( 40010):    43.09   1.022     6.42    14.96
08169>       + ID2= 2 ( 40030):    54.88   1.316     6.42    14.93
08170>         ================================================
08171>         ID = 3 ( 50010):    97.97   2.338     6.42    14.94
08172>
08173>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08174> ---------------------------------------------------------------------------
08175> --------------------
08176> | ROUTE CHN( 60010)|
08177> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
08178> --------------------
08179>               <------ DATA FOR SECTION (   1.1) ------>
08180>               Distance      Elevation       Manning
08181>                  0.00        160.98        0.0450
08182>                 10.00        160.83        0.0450
08183>                 20.00        160.72        0.0450
08184>                 30.00        160.67        0.0450
08185>                 40.00        160.61        0.0450
08186>                 50.00        160.60        0.0450
08187>                 60.00        160.55        0.0450
08188>                 70.00        160.65        0.0450
08189>                 80.00        159.78        0.0450
08190>                 90.00        157.33    0.0450 /0.0350  Main Channel
08191>                100.00        157.18        0.0350      Main Channel
08192>                110.00        158.55        0.0450
08193>                120.00        160.34        0.0450
08194>                130.00        160.29        0.0450
08195>                140.00        160.30        0.0450
08196>                150.00        160.38        0.0450
08197>                160.00        160.53        0.0450
08198>                170.00        160.58        0.0450
08199>                180.00        160.51        0.0450
08200>                190.00        160.53        0.0450
08201>
08202>      <--------------------- TRAVEL TIME TABLE ---------------------->
08203>       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
08204>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
08205>        0.15   157.33    .123E+04        0.4         0.43      57.39
08206>        0.32   157.50    .422E+04        2.5         0.88      27.82
08207>        0.49   157.67    .768E+04        6.3         1.20      20.47
08208>        0.66   157.83    .116E+05       11.5         1.45      16.89
08209>        0.83   158.00    .160E+05       18.2         1.67      14.70
08210>        0.99   158.17    .209E+05       26.5         1.86      13.18
08211>        1.16   158.34    .263E+05       36.3         2.03      12.06
08212>        1.33   158.51    .321E+05       47.9         2.19      11.18
08213>        1.50   158.68    .384E+05       62.7         2.40      10.21
08214>        1.67   158.84    .451E+05       79.9         2.60       9.41
08215>        1.84   159.01    .522E+05       99.0         2.79       8.79
08216>        2.00   159.18    .597E+05      120.2         2.96       8.28
08217>        2.17   159.35    .676E+05      143.3         3.11       7.86
08218>        2.34   159.52    .759E+05      168.5         3.26       7.51
08219>        2.51   159.69    .846E+05      195.8         3.40       7.20
08220>        2.68   159.86    .938E+05      224.4         3.52       6.97
08221>        2.85   160.02    .104E+06      254.6         3.61       6.78
08222>        3.02   160.19    .114E+06      287.5         3.70       6.62
08223>        3.18   160.36    .127E+06      315.8         3.64       6.72
08224>
08225>                                    <---- hydrograph ---->   <-pipe / channel->
08226>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
08227>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
08228>    INFLOW : ID= 2 ( 50010)    97.97     2.34    6.42  14.94      0.30      0.81
08229>    OUTFLOW: ID= 1 ( 60010)    97.97     1.52    6.75  14.94      0.24      0.59
08230>
08231>
08232>
08233> ---------------------------------------------------------------------------
08234> --------------------
08235> | CALIB            |
08236> | STANDHYD ( 40020)|   Area    (ha)=  51.32
08237> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
08238> --------------------
08239>                                    IMPERVIOUS    PERVIOUS (i)
08240>      Surface Area      (ha)=       33.87         17.45
08241>      Dep. Storage      (mm)=        2.00          6.20
08242>      Average Slope      (%)=        1.30          1.30
08243>      Length             (m)=      584.91         50.00
08244>      Mannings n            =       0.015         0.290
08245>
08246>      Max.Eff.Inten.(mm/hr)=       63.34         40.39
08247>                over (min)         10.00         25.00
08248>      Storage Coeff.  (min)=        8.91 (ii)    23.34 (ii)
08249>      Unit Hyd. Tpeak (min)=       10.00         25.00
08250>      Unit Hyd. peak  (cms)=        0.12          0.05
08251>                                                            *TOTALS*
08252>      PEAK FLOW       (cms)=        4.13          0.88          4.622 (iii)
08253>      TIME TO PEAK    (hrs)=        6.00          6.25          6.00
08254>      RUNOFF VOLUME    (mm)=       46.07         19.95         34.58
08255>      TOTAL RAINFALL   (mm)=       48.07         48.07         48.07
08256>      RUNOFF COEFFICIENT   =        0.96          0.42          0.72
08257>
08258>
08259>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
08260>             CN*  =  79.5    Ia = Dep. Storage  (Above)
08261>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
08262>            THAN THE STORAGE COEFFICIENT.
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08263>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08264>
08265> --------------------------------------------------------------------------------
08266>
08267> --------------------
08268> | ADD HYD  ( 50020)|
08269> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
08270> --------------------          (ha)    (cms)    (hrs)     (mm)
08271>         ID1= 1 ( 40020):    51.32   4.622     6.00    34.58
08272>       + ID2= 2 ( 60010):    97.97   1.516     6.75    14.94
08273>         ====================================================
08274>         ID = 3 ( 50020):   149.29   4.781     6.00    21.69
08275>
08276>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08277> --------------------------------------------------------------------------------
08278> --------------------
08279> | ROUTE CHN( 60020)|
08280> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
08281> --------------------
08282>               <------ DATA FOR SECTION (   1.1) ------>
08283>               Distance      Elevation       Manning
08284>                   0.00         153.66        0.0450
08285>                   1.00         153.24        0.0450
08286>                   2.00         152.95        0.0450
08287>                   3.00         152.70        0.0450
08288>                   4.00         152.40        0.0450
08289>                   5.00         152.09        0.0450
08290>                   6.00         151.83        0.0450
08291>                   7.00         151.60        0.0450
08292>                   8.00         151.49    0.0450 /0.0350  Main Channel
08293>                   9.00         151.42        0.0350      Main Channel
08294>                  10.00         151.38        0.0350      Main Channel
08295>                  11.00         151.40        0.0350      Main Channel
08296>                  12.00         151.38        0.0350      Main Channel
08297>                  13.00         151.38        0.0350      Main Channel
08298>                  14.00         151.38        0.0350      Main Channel
08299>                  15.00         151.50    0.0350 /0.0450  Main Channel
08300>                  16.00         151.56        0.0450
08301>                  17.00         151.60        0.0450
08302>                  25.00         153.59        0.0450
08303>                  26.00         153.63        0.0450
08304>
08305>       <---------------------- TRAVEL TIME TABLE ----------------------->
08306>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
08307>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
08308>         0.12  151.49    .140E+03        0.2         0.36      10.54
08309>         0.23  151.60    .355E+03        0.9         0.58       6.57
08310>         0.34  151.72    .624E+03        2.0         0.74       5.11
08311>         0.45  151.83    .916E+03        3.6         0.89       4.27
08312>         0.57  151.94    .123E+04        5.5         1.02       3.73
08313>         0.68  152.05    .157E+04        7.8         1.13       3.35
08314>         0.79  152.17    .193E+04       10.5         1.24       3.06
08315>         0.90  152.28    .231E+04       13.6         1.34       2.83
08316>         1.02  152.39    .271E+04       17.1         1.43       2.65
08317>         1.13  152.50    .314E+04       20.9         1.52       2.50
08318>         1.24  152.62    .358E+04       25.2         1.60       2.37
08319>         1.35  152.73    .405E+04       29.8         1.67       2.26
08320>         1.47  152.84    .454E+04       34.9         1.75       2.17
08321>         1.58  152.95    .505E+04       40.3         1.81       2.09
08322>         1.69  153.07    .558E+04       46.2         1.88       2.01
08323>         1.80  153.18    .614E+04       52.6         1.95       1.95
08324>         1.92  153.29    .672E+04       59.4         2.01       1.88
08325>         2.03  153.40    .731E+04       66.7         2.07       1.83
08326>         2.14  153.52    .793E+04       74.5         2.14       1.77
08327>
08328>                                    <---- hydrograph ---->   <-pipe / channel->
08329>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
08330>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
08331>    INFLOW : ID= 2 ( 50020)  149.29    4.78     6.00   21.69      0.52      0.96
08332>    OUTFLOW: ID= 1 ( 60020)  149.29    4.72     6.08   21.69      0.52      0.96
08333>
08334>
08335>
08336> --------------------------------------------------------------------------------
08337> --------------------
08338> | CALIB            |
08339> | STANDHYD ( 40040)|   Area    (ha)=  70.68
08340> |ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
08341> --------------------
08342>                              IMPERVIOUS    PERVIOUS (i)
08343>      Surface Area     (ha)=      52.31         18.38
08344>      Dep. Storage     (mm)=       2.00          6.00
08345>      Average Slope     (%)=       1.20          1.20
08346>      Length            (m)=     686.45         52.00
08347>      Mannings n           =      0.015         0.280
08348>
08349>      Max.Eff.Inten.(mm/hr)=      63.34         53.97
08350>                   over (min)      10.00         25.00
08351>      Storage Coeff.  (min)=      10.05 (ii)    23.24 (ii)
08352>      Unit Hyd. Tpeak (min)=      10.00         25.00
08353>      Unit Hyd. peak  (cms)=       0.11          0.05
08354>                                                      *TOTALS*
08355>      PEAK FLOW       (cms)=       5.85          1.25          6.579 (iii)
08356>      TIME TO PEAK    (hrs)=       6.00          6.25           6.00
08357>      RUNOFF VOLUME    (mm)=      46.07         22.42          36.61
08358>      TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
08359>      RUNOFF COEFFICIENT   =       0.96          0.47           0.76
08360>
08361>
08362>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
08363>             CN*  =  79.4    Ia = Dep. Storage  (Above)
08364>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
08365>            THAN THE STORAGE COEFFICIENT.
08366>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08367>
08368> --------------------------------------------------------------------------------
08369>
08370> --------------------
08371> | ADD HYD  ( 50220)|
08372> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
08373> --------------------          (ha)    (cms)    (hrs)     (mm)
08374>         ID1= 1 ( 40040):    70.68   6.579     6.00    36.61
08375>       + ID2= 2 ( 60020):   149.29   4.719     6.08    21.69
08376>         ====================================================
08377>         ID = 3 ( 50220):   219.97  11.098     6.08    26.48
08378>
08379>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08380> --------------------------------------------------------------------------------
08381> --------------------
08382> | RESERVOIR( 70010)|     OVERFLOW IS ON
08383> | IN= 2---> OUT= 1 |
08384> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
08385> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
08386>                            0.0000      0.0000   |    3.4010      4.4390
08387>                            0.0530      0.4910   |    4.8380      5.0560
08388>                            0.0890      0.7040   |    5.8470      5.5380
08389>                            0.2040      1.0890   |    6.5980      5.9190
08390>                            0.3240      1.4800   |    7.2560      6.2250
08391>                            0.3890      1.7490   |    7.9030      6.4820
08392>                            0.4470      1.9970   |    8.4910      6.6820
08393>                            0.5090      2.3490   |   12.0680      7.1150
08394>                            0.7420      2.9150   |   20.0000      7.2000
08395>                            1.7580      3.6690   |    0.0000      0.0000
08396>
08397>                                AREA     QPEAK     TPEAK       R.V.
08398>                                (ha)     (cms)     (hrs)       (mm)
08399>    INFLOW : ID= 2 ( 50220)    219.973    11.098      6.08      26.48
08400>    OUTFLOW: ID= 1 ( 70010)    219.973     1.617      8.08      26.47
08401>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
08402>
08403>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
08404>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
08405>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
08406>
08407>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.57
08408>                    TIME SHIFT OF PEAK FLOW          (min)=120.00
08409>                    MAXIMUM  STORAGE   USED       (ha.m.)=  3.5652
08410>
08411> --------------------------------------------------------------------------------
08412>
08413>   --------------------------
08414>   | Junction Command(70011) |
08415>   --------------------------
08416>
08417>                             AREA     QPEAK   TPEAK     R.V.
08418>                             (ha)     (cms)    (hrs)     (mm)
08419>   INFLOW : ID= 3( 70010)    0.00      0.00    0.00      0.00
08420>   OUTFLOW: ID= 2( 70011)    0.00      0.00    0.00      0.00
08421>
08422>   --------------------------------------------------------------------------------
08423>
08424> --------------------
08425> | ADD HYD  ( 70012)|
08426> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
08427> --------------------          (ha)    (cms)    (hrs)     (mm)
08428> *** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
08429> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
08430>         ID1= 1 ( 70010):   219.97   1.617     8.08    26.47
08431>       + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
08432>         ====================================================
08433>         ID = 3 ( 70012):   219.97   1.617     8.08    26.47
08434>
08435>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08436> --------------------------------------------------------------------------------
08437> --------------------
08438> | ROUTE CHN( 60040)|
08439> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
08440> --------------------
08441>               <------ DATA FOR SECTION (   1.1) ------>
08442>               Distance      Elevation       Manning
08443>                   0.00         148.49        0.0450
08444>                   3.00         148.12        0.0450
08445>                   6.00         148.07        0.0450
08446>                   9.00         147.63        0.0450
08447>                  12.00         147.56        0.0450
08448>                  15.00         147.55        0.0450
08449>                  18.00         147.46        0.0450
08450>                  21.00         147.41        0.0450
08451>                  24.00         147.36        0.0450
08452>                  27.00         147.38        0.0450
08453>                  30.00         147.22        0.0450
08454>                  33.00         147.00        0.0450
08455>                  36.00         146.34        0.0450
08456>                  39.00         145.57        0.0350      Main Channel
08457>                  42.00         145.39        0.0350      Main Channel
08458>                  45.00         145.66        0.0350      Main Channel
08459>                  48.00         146.68        0.0450
08460>                  51.00         147.50        0.0450
08461>                  55.00         148.22        0.0450
08462>                  60.00         148.42        0.0450
08463>
08464>       <---------------------- TRAVEL TIME TABLE ----------------------->
08465>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
08466>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
08467>         0.09  145.48    .145E+03        0.0         0.25      83.65
08468>         0.18  145.57    .581E+03        0.2         0.40      52.70
08469>         0.35  145.74    .189E+04        1.1         0.73      29.09
08470>         0.52  145.91    .348E+04        2.7         0.99      21.52
08471>         0.68  146.07    .532E+04        5.0         1.19      17.84
08472>         0.85  146.24    .740E+04        7.9         1.36      15.60
08473>         1.02  146.41    .973E+04       11.5         1.51      14.07
08474>         1.19  146.58    .123E+05       15.9         1.64      12.94
08475>         1.35  146.74    .152E+05       21.2         1.78      11.93
08476>         1.52  146.91    .183E+05       27.8         1.94      10.99
08477>         1.69  147.08    .218E+05       35.0         2.05      10.39
08478>         1.86  147.25    .259E+05       43.0         2.12      10.03
08479>         2.02  147.41    .309E+05       50.6         2.09      10.18
08480>         2.19  147.58    .383E+05       61.5         2.05      10.37
08481>         2.36  147.75    .474E+05       77.1         2.07      10.25
08482>         2.52  147.91    .571E+05       95.6         2.14       9.95
08483>         2.69  148.08    .672E+05      116.0         2.20       9.65
08484>         2.86  148.25    .783E+05      138.1         2.25       9.45
08485>         3.03  148.42    .904E+05      163.4         2.31       9.22
08486>
08487>                                    <---- hydrograph ---->   <-pipe / channel->
08488>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
08489>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
08490>    INFLOW : ID= 2 ( 70012)  219.97    1.62     8.08   26.47      0.40      0.80
08491>    OUTFLOW: ID= 1 ( 60040)  219.97    1.58     8.50   26.46      0.40      0.79
08492>
08493>
08494>
08495> --------------------------------------------------------------------------------
08496> --------------------
08497> | CALIB            |
08498> | STANDHYD ( 40050)|   Area    (ha)=  52.28
08499> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
08500> --------------------
08501>                              IMPERVIOUS    PERVIOUS (i)
08502>      Surface Area     (ha)=      32.94         19.34
08503>      Dep. Storage     (mm)=       2.00          6.30
08504>      Average Slope     (%)=       3.30          3.30
08505>      Length            (m)=     590.36         68.00
08506>      Mannings n           =      0.015         0.270
08507>
08508>      Max.Eff.Inten.(mm/hr)=      63.34         47.78
08509>                   over (min)       5.00         20.00
08510>      Storage Coeff.  (min)=       6.78 (ii)    18.53 (ii)
08511>      Unit Hyd. Tpeak (min)=       5.00         20.00
08512>      Unit Hyd. peak  (cms)=       0.18          0.06
08513>                                                      *TOTALS*
08514>      PEAK FLOW       (cms)=       4.18          1.35          5.102 (iii)
08515>      TIME TO PEAK    (hrs)=       6.00          6.17           6.00
08516>      RUNOFF VOLUME    (mm)=      46.07         22.03          33.81
08517>      TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
08518>      RUNOFF COEFFICIENT   =       0.96          0.46           0.70
08519>
08520>
08521>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
08522>             CN*  =  81.3    Ia = Dep. Storage  (Above)
08523>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
08524>            THAN THE STORAGE COEFFICIENT.
08525>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08526>
08527> --------------------------------------------------------------------------------
08528>
08529> --------------------
08530> | ADD HYD  ( 50040)|
08531> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
08532> --------------------          (ha)    (cms)    (hrs)     (mm)
08533>         ID1= 1 ( 40050):    52.28   5.102     6.00    33.81
08534>       + ID2= 2 ( 60040):   219.97   1.577     8.50    26.46
08535>         ====================================================
08536>         ID = 3 ( 50040):   272.25   5.188     6.00    27.88
08537>
08538>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08539> --------------------------------------------------------------------------------
08540> --------------------
08541> | ROUTE CHN( 60050)|
08542> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
08543> --------------------
08544>               <------ DATA FOR SECTION (   1.1) ------>
08545>               Distance      Elevation       Manning
08546>                   0.00         146.35        0.0450
08547>                  16.00         145.17        0.0450
08548>                  18.00         144.62        0.0450
08549>                  20.00         143.50        0.0450
08550>                  26.00         141.63        0.0350      Main Channel
08551>                  30.00         142.17        0.0350      Main Channel
08552>                  34.00         144.28        0.0450
08553>                  38.00         145.27        0.0450
08554>                  50.00         146.42        0.0450
08555>
08556>       <---------------------- TRAVEL TIME TABLE ----------------------->
08557>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
08558>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
08559>         0.25  141.88    .129E+03        0.2         0.54      12.17
08560>         0.50  142.13    .516E+03        1.1         0.86       7.67
08561>         0.74  142.38    .111E+04        3.4         1.21       5.42
08562>         0.99  142.63    .184E+04        7.0         1.50       4.37
08563>         1.24  142.87    .269E+04       11.9         1.75       3.76
08564>         1.49  143.12    .366E+04       18.2         1.96       3.36
08565>         1.74  143.37    .476E+04       25.9         2.15       3.06
08566>         1.98  143.62    .597E+04       35.3         2.33       2.82
08567>         2.23  143.87    .729E+04       46.5         2.52       2.61
08568>         2.48  144.11    .869E+04       59.3         2.69       2.44
```

```
        2.73   144.36    .102E+05      74.3          2.88       2.28
        2.97   144.61    .118E+05      92.4          3.09       2.13
        3.22   144.86    .136E+05     111.6          3.24       2.03
        3.47   145.11    .156E+05     133.1          3.37       1.95
        3.72   145.35    .178E+05     152.6          3.38       1.94
        3.97   145.60    .206E+05     175.6          3.37       1.95
        4.21   145.85    .239E+05     204.3          3.37       1.95
        4.46   146.10    .279E+05     238.6          3.38       1.95
        4.71   146.35    .324E+05     279.0          3.40       1.93

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  272.25     5.19    6.00  27.88      0.86      1.34
   OUTFLOW: ID= 1 ( 60050)  272.25     4.64    6.00  27.88      0.83      1.30


 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60060)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        142.52        0.0450
                    2.00        142.41        0.0450
                    4.00        142.26        0.0450
                    6.00        142.08        0.0450
                    8.00        141.85        0.0450
                   10.00        141.61        0.0450
                   12.00        141.38        0.0450
                   14.00        141.11        0.0450
                   16.00        140.93        0.0450
                   18.00        140.83        0.0450
                   20.00        140.73        0.0350      Main Channel
                   22.00        140.55        0.0350      Main Channel
                   24.00        140.49        0.0350      Main Channel
                   26.00        140.65        0.0350      Main Channel
                   28.00        141.04        0.0450
                   30.00        141.72        0.0450
                   32.00        142.19        0.0450
                   40.00        142.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)      (cu.m.)      (cms)        (m/s)       (min)
         0.08   140.57    .466E+02        0.0          0.23       24.59
         0.15   140.65    .155E+03        0.2          0.38       14.98
         0.23   140.73    .305E+03        0.5          0.51       11.12
         0.34   140.84    .598E+03        1.2          0.68        8.29
         0.45   140.95    .995E+03        2.3          0.80        7.09
         0.56   141.06    .147E+04        3.9          0.91        6.22
         0.68   141.17    .201E+04        6.1          1.04        5.45
         0.79   141.28    .259E+04        8.8          1.16        4.89
         0.90   141.39    .321E+04       12.0          1.27        4.47
         1.01   141.50    .389E+04       15.6          1.36        4.16
         1.12   141.61    .461E+04       19.7          1.45        3.90
         1.23   141.72    .537E+04       24.3          1.54        3.69
         1.34   141.84    .619E+04       29.4          1.61        3.52
         1.45   141.95    .707E+04       35.0          1.68        3.37
         1.56   142.06    .799E+04       41.1          1.75        3.24
         1.67   142.17    .898E+04       47.8          1.81        3.13
         1.79   142.28    .101E+05       54.6          1.85        3.07
         1.90   142.39    .113E+05       62.1          1.87        3.03
         2.01   142.50    .127E+05       70.3          1.88        3.01

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50050)  272.25     4.64    6.00  27.88      0.60      0.95
   OUTFLOW: ID= 1 ( 60060)  272.25     4.24    6.08  27.87      0.58      0.93


 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40060)|   Area    (ha)=   2.84
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
 --------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94         1.90
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       2.60         2.60
     Length            (m)=     137.56        98.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=      63.34        23.27
                   over (min)        5.00        30.00
     Storage Coeff.  (min)=       3.04 (ii)   26.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.27         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.07          0.164 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33          6.00
     RUNOFF VOLUME    (mm)=      46.07        19.29         26.32
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.40          0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD  ( 50070)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40060):     2.84   0.164     6.00    26.32
      + ID2= 2 ( 60060):   272.25   4.239     6.08    27.87
        ================================================
        ID = 3 ( 50070):   275.09   4.324     6.08    27.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40080)|   Area    (ha)=  39.85
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
 --------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30        13.55
     Dep. Storage     (mm)=       2.00         5.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     515.42        72.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        37.95
                   over (min)       10.00        30.00
     Storage Coeff.  (min)=       8.08 (ii)   25.33 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.13         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.18         0.74          3.545 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33          6.00
     RUNOFF VOLUME    (mm)=      46.07        21.94         34.97
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.46          0.73

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD  ( 50080)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40080):    39.85   3.545     6.00    34.97
      + ID2= 2 ( 50070):   275.09   4.324     6.08    27.86
        ================================================
        ID = 3 ( 50080):   314.94   7.654     6.08    28.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60080)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        141.24        0.0450
                   40.00        140.58        0.0450
                   50.00        140.57        0.0450
                   60.00        140.36        0.0450
                   70.00        140.19        0.0450
                   80.00        140.15        0.0450
                   90.00        139.70        0.0450
                  100.00        139.54        0.0350      Main Channel
                  110.00        139.97        0.0450
                  120.00        140.53        0.0450
                  130.00        140.63        0.0450
                  140.00        140.72        0.0450
                  150.00        140.87        0.0450
                  190.00        141.16        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)      (cu.m.)      (cms)        (m/s)       (min)
         0.09   139.63    .150E+03        0.1          0.18       43.53
         0.17   139.71    .598E+03        0.4          0.30       27.01
         0.26   139.80    .126E+04        1.1          0.42       19.24
         0.34   139.88    .209E+04        2.2          0.52       15.58
         0.43   139.97    .307E+04        3.8          0.60       13.36
         0.51   140.05    .420E+04        6.1          0.70       11.45
         0.60   140.14    .548E+04        9.0          0.79       10.19
         0.68   140.22    .714E+04       11.3          0.76       10.55
         0.77   140.31    .919E+04       15.7          0.82        9.77
         0.85   140.39    .115E+05       21.0          0.88        9.11
         0.94   140.48    .141E+05       27.4          0.94        8.54
         1.02   140.56    .169E+05       34.6          0.99        8.12
         1.11   140.65    .205E+05       41.1          0.97        8.32
         1.19   140.74    .248E+05       51.5          1.00        8.02
         1.28   140.82    .296E+05       64.0          1.04        7.70
         1.36   140.91    .348E+05       78.0          1.08        7.44
         1.45   140.99    .407E+05       93.6          1.11        7.24
         1.53   141.08    .472E+05      111.7          1.14        7.05
         1.62   141.16    .545E+05      132.2          1.17        6.87

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94     7.65    6.08  28.76      0.56      0.75
   OUTFLOW: ID= 1 ( 60080)  314.94     6.33    6.17  28.76      0.52      0.71


 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40090)|   Area    (ha)=   4.45
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
 --------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.99         3.46
     Dep. Storage     (mm)=       2.00         9.68
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     172.19        99.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=      63.34        13.33
                   over (min)        5.00        40.00
     Storage Coeff.  (min)=       3.56 (ii)   36.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.26         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.08          0.129 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.58          6.00
     RUNOFF VOLUME    (mm)=      46.07        14.42         18.78
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.30          0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 --------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50090)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40090):     4.45   0.129     6.00    18.78
      + ID2= 2 ( 60080):   314.94   6.327     6.17    28.76
        ================================================
        ID = 3 ( 50090):   319.39   6.389     6.17    28.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60100)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        138.71        0.0450
                    4.00        136.97        0.0450
                   28.00        135.94        0.0450
                   32.00        135.79        0.0350      Main Channel
                   36.00        135.23        0.0350      Main Channel
                   40.00        135.71    0.0350 /0.0450  Main Channel
                   54.00        136.96        0.0450
                   80.00        138.63        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)      (cu.m.)      (cms)        (m/s)       (min)
         0.16   135.39    .631E+02        0.1          0.44       12.42
         0.31   135.55    .253E+03        0.5          0.69        7.83
         0.47   135.71    .568E+03        1.6          0.91        5.97
         0.65   135.89    .114E+04        4.2          1.20        4.52
         0.84   136.07    .209E+04        8.7          1.35        4.02
         1.02   136.25    .342E+04       15.4          1.47        3.70
         1.20   136.44    .511E+04       24.8          1.58        3.44
         1.38   136.62    .718E+04       37.2          1.69        3.21
         1.57   136.80    .962E+04       53.1          1.79        3.02
         1.75   136.98    .124E+05       72.7          1.90        2.85
         1.93   137.17    .155E+05       97.8          2.05        2.64
         2.11   137.35    .188E+05      127.1          2.20        2.47
         2.30   137.53    .223E+05      160.4          2.34        2.31
         2.48   137.71    .259E+05      197.8          2.48        2.19
         2.66   137.90    .298E+05      239.5          2.61        2.07
         2.85   138.08    .339E+05      285.4          2.74        1.98
         3.03   138.26    .381E+05      335.6          2.86        1.89
         3.21   138.44    .426E+05      390.3          2.98        1.82
         3.39   138.63    .472E+05      449.4          3.10        1.75

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
```

```
    INFLOW : ID= 2 ( 50090)  319.39     6.39    6.17  28.62      0.74      1.27
    OUTFLOW: ID= 1 ( 60100)  319.39     6.17    6.25  28.62      0.73      1.26


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.46        14.44
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     423.45       125.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      63.34        18.15
                   over (min)       5.00        45.00
     Storage Coeff.  (min)=       7.18 (ii)   40.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        45.00
     Unit Hyd. peak  (cms)=       0.17         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.84         0.41          1.966 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.58           6.00
     RUNOFF VOLUME    (mm)=      46.07        19.72          30.90
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.41           0.64

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40100):    26.90   1.966     6.00    30.90
      + ID2= 2 ( 60100):   319.39   6.172     6.25    28.62
        ================================================
        ID = 3 ( 50110):   346.28   6.902     6.25    28.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

     Unit Hyd Qpeak  (cms)=   3.961

     PEAK FLOW       (cms)=   1.227 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  16.088
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.335

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

     Unit Hyd Qpeak  (cms)=   4.875

     PEAK FLOW       (cms)=   1.736 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  17.531
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.365

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   1.227     6.33    16.09
      + ID2= 2 ( 40130):    63.82   1.736     6.42    17.53
        ================================================
        ID = 3 ( 50130):   108.42   2.941     6.42    16.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.27        0.0450
                   2.00        155.23        0.0450
                   4.00        155.21        0.0450
                   6.00        155.08        0.0450
                   8.00        154.94        0.0450
                  10.00        154.68        0.0450
                  12.00        154.21        0.0450
                  14.00        153.90        0.0450
                  16.00        153.41        0.0350      Main Channel
                  18.00        153.58        0.0350      Main Channel
                  20.00        153.72    0.0350 /0.0450  Main Channel
                  22.00        153.77        0.0450
                  24.00        153.77        0.0450
                  26.00        153.82        0.0450
                  28.00        153.79        0.0450
                  30.00        153.87        0.0450
                  32.00        153.99        0.0450
                  34.00        154.44        0.0450
                  36.00        154.86        0.0450
                  40.00        155.37        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   153.50    .107E+03       0.0         0.27      87.23
        0.20   153.60    .429E+03       0.1         0.42      55.65
        0.29   153.70    .991E+03       0.4         0.55      42.98
        0.39   153.80    .201E+04       0.9         0.66      35.52
        0.49   153.90    .408E+04       2.1         0.71      33.15
        0.59   153.99    .651E+04       3.7         0.81      29.01
        0.69   154.09    .916E+04       6.1         0.93      25.22
        0.79   154.19    .120E+05       8.9         1.05      22.39
        0.88   154.29    .149E+05      12.3         1.16      20.20
        0.98   154.39    .179E+05      16.2         1.27      18.49
        1.08   154.49    .211E+05      20.5         1.37      17.13
        1.18   154.58    .244E+05      25.4         1.47      16.02
        1.28   154.68    .278E+05      30.7         1.56      15.10
        1.37   154.78    .314E+05      36.4         1.63      14.38
        1.47   154.88    .351E+05      42.5         1.71      13.77
        1.57   154.98    .391E+05      48.9         1.76      13.33
        1.67   155.07    .433E+05      55.6         1.81      12.98
        1.77   155.17    .478E+05      63.0         1.86      12.65
        1.86   155.27    .528E+05      69.8         1.86      12.62

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50130)  108.42     2.94     6.42   16.94       0.54      0.76
OUTFLOW: ID= 1 ( 60130)  108.42     2.08     6.83   16.93       0.49      0.71


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      46.69        19.07
     Dep. Storage     (mm)=       2.00         6.30
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     662.12        66.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=      63.34        34.32
                   over (min)       10.00        30.00
     Storage Coeff.  (min)=       9.60 (ii)   27.79 (ii)
     Unit Hyd. Tpeak (min)=       10.00        30.00
     Unit Hyd. peak  (cms)=       0.11         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.62         0.89          6.051 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33           6.00
     RUNOFF VOLUME    (mm)=      46.07        20.05          35.92
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.42           0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76   6.051     6.00    35.92
      + ID2= 2 ( 60130):   108.42   2.080     6.83    16.93
        ================================================
        ID = 3 ( 50180):   174.18   6.323     6.00    24.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.55         3.33
     Dep. Storage     (mm)=       2.00         6.90
     Average Slope     (%)=       1.00         1.00
     Length            (m)=     304.26        66.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=      63.34        21.63
                   over (min)       5.00        35.00
     Storage Coeff.  (min)=       6.51 (ii)   31.15 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.18         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.67         0.11          1.706 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42           6.00
     RUNOFF VOLUME    (mm)=      46.07        17.81          38.44
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.37           0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.74         8.05
     Dep. Storage     (mm)=       2.00         8.12
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     303.13       131.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      63.34        12.01
                   over (min)       5.00        45.00
     Storage Coeff.  (min)=       5.00 (ii)   43.90 (ii)
     Unit Hyd. Tpeak (min)=       5.00        45.00
     Unit Hyd. peak  (cms)=       0.21         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.91         0.16          0.948 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.67           6.00
     RUNOFF VOLUME    (mm)=      46.07        14.92          26.95
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.31           0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.90        0.0450
                   1.00        154.69        0.0450
                   2.00        154.30        0.0450
                   3.00        154.00    0.0450 /0.0350  Main Channel
                   4.00        153.74        0.0350      Main Channel
                   5.00        153.51        0.0350      Main Channel
                   6.00        153.46        0.0350      Main Channel
                   7.00        153.77        0.0350      Main Channel
                   8.00        154.10    0.0350 /0.0450  Main Channel
                   9.00        154.50        0.0450
                  10.00        154.84        0.0450
                  11.00        155.13        0.0450
                  12.00        155.26        0.0450
                  13.00        155.32        0.0450
                  14.00        155.42        0.0450
                  15.00        155.52        0.0450
                  16.00        155.62        0.0450
                  17.00        155.69        0.0450
                  18.00        155.76        0.0450
                  20.00        155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   153.57    .445E+02       0.0         0.32      21.18
        0.22   153.68    .135E+03       0.2         0.51      13.45
        0.33   153.79    .262E+03       0.4         0.66      10.46
        0.43   153.89    .423E+03       0.8         0.79       8.73
        0.54   154.00    .616E+03       1.3         0.90       7.61
        0.68   154.14    .900E+03       2.4         1.09       6.30
        0.81   154.27    .123E+04       3.8         1.27       5.40
        0.95   154.41    .160E+04       5.5         1.42       4.83
        1.08   154.54    .201E+04       7.6         1.55       4.43
        1.22   154.68    .246E+04       9.9         1.67       4.12
        1.35   154.81    .294E+04      12.7         1.78       3.86
        1.48   154.94    .345E+04      15.8         1.88       3.65
```

```
        1.62   155.08    .400E+04      19.2          1.97       3.48
        1.75   155.21    .458E+04      22.9          2.05       3.34
        1.89   155.35    .524E+04      26.8          2.11       3.26
        2.02   155.48    .599E+04      31.4          2.16       3.18
        2.16   155.62    .682E+04      36.5          2.20       3.12
        2.29   155.75    .774E+04      41.9          2.23       3.08
        2.43   155.89    .878E+04      48.0          2.25       3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     0.95    6.00  26.95      0.46      0.81
   OUTFLOW: ID= 1 ( 60190)   13.78     0.77    6.00  26.95      0.42      0.77


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      17.41          5.53
     Dep. Storage     (mm)=       2.00          6.75
     Average Slope     (%)=       3.00          3.00
     Length            (m)=     391.08        150.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=      63.34         14.61
                 over (min)        5.00         40.00
     Storage Coeff.  (min)=       5.45 (ii)    38.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00         40.00
     Unit Hyd. peak  (cms)=       0.20          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.89          0.13          2.935 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.58          6.00
     RUNOFF VOLUME    (mm)=      46.07         16.57         38.62
     TOTAL RAINFALL   (mm)=      48.07         48.07         48.07
     RUNOFF COEFFICIENT   =       0.96          0.34          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40180):    13.89    1.706     6.00    38.44
     + ID2= 2 ( 40200):    22.94    2.935     6.00    38.62
       ================================================
       ID = 3 ( 50200):    36.83    4.642     6.00    38.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50200):    36.83    4.642     6.00    38.55
     + ID2= 2 ( 60190):    13.78    0.774     6.00    26.95
       ================================================
       ID = 1 ( 50200):    50.61    5.415     6.00    35.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.01          1.06
     Dep. Storage     (mm)=       2.00          6.27
     Average Slope     (%)=       0.90          0.90
     Length            (m)=     201.21        118.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=      63.34         12.34
                 over (min)        5.00         50.00
     Storage Coeff.  (min)=       5.25 (ii)    48.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00         50.00
     Unit Hyd. peak  (cms)=       0.21          0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.84          0.02          0.847 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.75          6.00
     RUNOFF VOLUME    (mm)=      46.07         16.55         40.69
     TOTAL RAINFALL   (mm)=      48.07         48.07         48.07
     RUNOFF COEFFICIENT   =       0.96          0.34          0.85

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40210):     6.07    0.847     6.00    40.69
     + ID2= 2 ( 50200):    50.61    5.415     6.00    35.39
       ================================================
       ID = 3 ( 50210):    56.68    6.262     6.00    35.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.62        0.0450
                   7.00         152.39        0.0450
                   8.00         152.02        0.0450
                   9.00         151.48        0.0450
                  10.00         151.01        0.0450
                  11.00         150.56    0.0450 /0.0350  Main Channel
                  12.00         150.38        0.0350      Main Channel
                  13.00         150.40        0.0350      Main Channel
                  14.00         150.36        0.0350      Main Channel
                  15.00         150.60    0.0350 /0.0450  Main Channel
                  16.00         150.99        0.0450
                  17.00         151.50        0.0450
                  18.00         151.91        0.0450
                  19.00         152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   150.46    .580E+02        0.1         0.30      17.06
        0.20   150.56    .160E+03        0.3         0.48      10.57
        0.32   150.68    .314E+03        0.7         0.70       7.18
        0.44   150.80    .489E+03        1.4         0.89       5.71
        0.56   150.92    .686E+03        2.3         1.03       4.89
        0.69   151.04    .904E+03        3.5         1.16       4.35
        0.81   151.16    .114E+04        4.8         1.28       3.95
        0.93   151.29    .140E+04        6.4         1.38       3.66
        1.05   151.41    .167E+04        8.1         1.48       3.42
        1.17   151.53    .196E+04       10.1         1.57       3.22
        1.29   151.65    .227E+04       12.3         1.65       3.06
        1.41   151.77    .260E+04       14.8         1.73       2.93
        1.54   151.89    .295E+04       17.5         1.80       2.81
        1.66   152.01    .331E+04       20.4         1.87       2.70
        1.78   152.13    .369E+04       23.6         1.94       2.61
        1.90   152.26    .409E+04       27.0         2.00       2.52
        2.02   152.38    .451E+04       30.7         2.06       2.45
        2.14   152.50    .500E+04       33.4         2.03       2.49
        2.26   152.62    .563E+04       37.3         2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50210)   56.68     6.26    6.00  35.96      0.92      1.37
   OUTFLOW: ID= 1 ( 60210)   56.68     5.94    6.00  35.96      0.90      1.35


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--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.91          2.40
     Dep. Storage     (mm)=       2.00          6.17
     Average Slope     (%)=       0.60          0.60
     Length            (m)=     274.66         79.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=      63.34         13.73
                 over (min)        5.00         45.00
     Storage Coeff.  (min)=       7.14 (ii)    43.99 (ii)
     Unit Hyd. Tpeak (min)=       5.00         45.00
     Unit Hyd. peak  (cms)=       0.17          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.42          0.05          1.437 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.67          6.00
     RUNOFF VOLUME    (mm)=      46.07         16.99         39.60
     TOTAL RAINFALL   (mm)=      48.07         48.07         48.07
     RUNOFF COEFFICIENT   =       0.96          0.35          0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40220):    11.32    1.437     6.00    39.60
     + ID2= 2 ( 60210):    56.68    5.935     6.00    35.96
       ================================================
       ID = 3 ( 50120):    68.00    7.372     6.00    36.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50120):    68.00    7.372     6.00    36.57
     + ID2= 2 ( 50180):   174.18    6.323     6.00    24.10
       ================================================
       ID = 3 ( 50140):   242.18   13.695     6.00    27.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.29        0.0450
                   2.00         152.20        0.0450
                   4.00         152.17        0.0450
                   6.00         152.15        0.0450
                   8.00         151.78        0.0450
                  10.00         151.28        0.0450
                  12.00         150.79        0.0450
                  14.00         150.20    0.0450 /0.0350  Main Channel
                  16.00         149.82        0.0350      Main Channel
                  18.00         149.51        0.0350      Main Channel
                  20.00         149.24        0.0350      Main Channel
                  22.00         149.48        0.0350      Main Channel
                  24.00         150.00    0.0350 /0.0450  Main Channel
                  26.00         150.52        0.0450
                  28.00         151.14        0.0450
                  30.00         151.68        0.0450
                  32.00         152.11        0.0450
                  34.00         152.20        0.0450
                  35.00         152.27        0.0450
                  38.00         152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   149.39    .694E+02        0.1         0.32      19.63
        0.31   149.54    .273E+03        0.4         0.53      11.92
        0.46   149.70    .577E+03        1.1         0.72       8.87
        0.61   149.85    .972E+03        2.2         0.87       7.30
        0.76   150.00    .145E+04        3.9         1.01       6.26
        0.93   150.16    .205E+04        6.4         1.18       5.36
        1.09   150.33    .274E+04        9.9         1.37       4.62
        1.25   150.49    .350E+04       14.2         1.54       4.11
        1.42   150.65    .434E+04       19.3         1.69       3.75
        1.58   150.82    .524E+04       25.2         1.83       3.47
        1.74   150.98    .621E+04       31.8         1.95       3.26
        1.91   151.14    .726E+04       39.2         2.06       3.09
        2.07   151.31    .839E+04       47.5         2.16       2.94
        2.23   151.47    .959E+04       56.6         2.25       2.82
        2.40   151.63    .109E+05       66.7         2.34       2.72
        2.56   151.80    .122E+05       77.6         2.41       2.63
        2.72   151.96    .137E+05       89.3         2.48       2.55
        2.89   152.12    .153E+05      102.0         2.55       2.49
        3.05   152.29    .172E+05      111.6         2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)  242.18    13.70    6.00  27.60      1.23      1.52
   OUTFLOW: ID= 1 ( 60140)  242.18    12.75    6.08  27.60      1.20      1.48


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--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         151.02        0.0450
                   2.00         150.89        0.0450
                   4.00         150.73        0.0450
                   6.00         150.65        0.0450
                   8.00         150.38        0.0450
                  10.00         149.93        0.0450
                  12.00         149.51        0.0450
                  14.00         149.02    0.0450 /0.0350  Main Channel
                  16.00         148.64        0.0350      Main Channel
                  18.00         148.27        0.0350      Main Channel
                  20.00         148.39        0.0350      Main Channel
                  22.00         148.60        0.0350      Main Channel
                  24.00         148.94    0.0350 /0.0450  Main Channel
                  26.00         149.34        0.0450
                  28.00         149.66        0.0450
```

```
                  30.00        150.12        0.0450
                  32.00        150.45        0.0450
                  34.00        150.52        0.0450
                  36.00        150.60        0.0450
                  38.00        150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   148.38    .283E+02       0.0         0.26      13.34
        0.22   148.49    .107E+03       0.2         0.44       7.98
        0.34   148.60    .226E+03       0.6         0.58       6.07
        0.45   148.72    .380E+03       1.3         0.72       4.90
        0.56   148.83    .563E+03       2.2         0.84       4.20
        0.67   148.94    .775E+03       3.5         0.95       3.72
        0.80   149.07    .105E+04       5.5         1.11       3.17
        0.93   149.20    .136E+04       8.2         1.27       2.77
        1.06   149.32    .170E+04      11.3         1.41       2.50
        1.18   149.45    .207E+04      14.9         1.52       2.31
        1.31   149.58    .248E+04      19.1         1.63       2.17
        1.44   149.71    .292E+04      23.8         1.72       2.05
        1.57   149.83    .340E+04      29.1         1.81       1.95
        1.70   149.96    .391E+04      34.9         1.89       1.87
        1.82   150.09    .445E+04      41.4         1.97       1.79
        1.95   150.22    .502E+04      48.4         2.04       1.73
        2.08   150.35    .563E+04      56.0         2.10       1.67
        2.21   150.47    .628E+04      63.9         2.15       1.64
        2.33   150.60    .702E+04      71.1         2.14       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.  MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 60140)  242.18    12.75    6.08  27.60      1.11      1.45
   OUTFLOW: ID= 1 ( 60150)  242.18    12.79    6.08  27.60      1.11      1.45



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40150)|   Area    (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.11         2.26
     Dep. Storage     (mm)=       2.00         6.34
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     189.18        45.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=      63.34        32.54
                   over (min)     5.00        20.00
     Storage Coeff.  (min)=      3.82 (ii)   16.26 (ii)
     Unit Hyd. Tpeak (min)=      5.00        20.00
     Unit Hyd. peak  (cms)=      0.25         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.49         0.11        0.562 (iii)
     TIME TO PEAK    (hrs)=      6.00         6.17        6.00
     RUNOFF VOLUME    (mm)=     46.07        18.33       32.79
     TOTAL RAINFALL   (mm)=     48.07        48.07       48.07
     RUNOFF COEFFICIENT   =      0.96         0.38        0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40150):     5.37   0.562     6.00    32.79
     + ID2= 2 ( 60150):   242.18  12.794     6.08    27.60
       ================================================
       ID = 3 ( 50160):   247.54  13.075     6.08    27.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40240)|   Area    (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.79         1.50
     Dep. Storage     (mm)=       2.00         5.70
     Average Slope     (%)=       3.40         3.40
     Length            (m)=     261.85        70.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        27.82
                   over (min)     5.00        20.00
     Storage Coeff.  (min)=      4.12 (ii)   18.84 (ii)
     Unit Hyd. Tpeak (min)=      5.00        20.00
     Unit Hyd. peak  (cms)=      0.24         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=      1.51         0.06        1.549 (iii)
     TIME TO PEAK    (hrs)=      6.00         6.17        6.00
     RUNOFF VOLUME    (mm)=     46.07        17.23       41.71
     TOTAL RAINFALL   (mm)=     48.07        48.07       48.07
     RUNOFF COEFFICIENT   =      0.96         0.36        0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40250)|   Area    (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.61         4.75
     Dep. Storage     (mm)=       2.00         7.14
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     298.43        70.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=      63.34        17.62
                   over (min)     5.00        30.00
     Storage Coeff.  (min)=      5.23 (ii)   28.16 (ii)
     Unit Hyd. Tpeak (min)=      5.00        30.00
     Unit Hyd. peak  (cms)=      0.21         0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=      1.42         0.13        1.482 (iii)
     TIME TO PEAK    (hrs)=      6.00         6.42        6.00
     RUNOFF VOLUME    (mm)=     46.07        15.86       34.86
     TOTAL RAINFALL   (mm)=     48.07        48.07       48.07
     RUNOFF COEFFICIENT   =      0.96         0.33        0.73

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        155.56        0.0450
                    2.00        155.23        0.0450
                    4.00        154.58        0.0450
                    6.00        153.92        0.0450
                    8.00        153.53        0.0450
                   10.00        152.64        0.0450
                   12.00        152.43    0.0450 /0.0350  Main Channel
                   14.00        152.24        0.0350      Main Channel
                   16.00        152.07        0.0350      Main Channel
                   18.00        152.30    0.0350 /0.0450  Main Channel
                   20.00        152.46        0.0450
                   22.00        155.55        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   152.18    .895E+02       0.1         0.43      24.33
        0.24   152.30    .356E+03       0.4         0.69      15.20
        0.43   152.49    .118E+04       2.1         1.10       9.55
        0.62   152.68    .234E+04       5.5         1.48       7.09
        0.81   152.88    .361E+04      10.4         1.83       5.76
        1.00   153.07    .494E+04      16.7         2.13       4.94
        1.19   153.26    .634E+04      24.2         2.40       4.38
        1.38   153.45    .781E+04      32.8         2.65       3.97
        1.58   153.64    .936E+04      42.5         2.86       3.67
        1.77   153.83    .110E+05      53.3         3.05       3.45
        1.96   154.02    .128E+05      65.6         3.23       3.26
        2.15   154.21    .147E+05      79.4         3.40       3.09
        2.34   154.40    .167E+05      94.5         3.57       2.95
        2.53   154.60    .188E+05     111.0         3.73       2.82
        2.72   154.79    .209E+05     128.7         3.89       2.71
        2.91   154.98    .231E+05     147.8         4.03       2.61
        3.10   155.17    .255E+05     168.3         4.17       2.52
        3.30   155.36    .279E+05     189.2         4.28       2.46
        3.49   155.55    .305E+05     211.3         4.38       2.40

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.  MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     1.48    6.00  34.86      0.36      0.91
   OUTFLOW: ID= 1 ( 60240)   13.36     1.04    6.00  34.85      0.31      0.81



--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40240):    10.28   1.549     6.00    41.71
     + ID2= 2 ( 50160):   247.54  13.075     6.08    27.71
       ================================================
       ID = 3 ( 50250):   257.83  13.724     6.08    28.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50250):   257.83  13.724     6.08    28.27
     + ID2= 2 ( 60240):    13.36   1.043     6.00    34.85
       ================================================
       ID = 1 ( 50250):   271.19  14.767     6.08    28.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        149.47        0.0450
                    3.00        149.39        0.0450
                    6.00        149.18        0.0450
                    9.00        148.85        0.0450
                   12.00        148.60        0.0450
                   15.00        148.16        0.0450
                   18.00        147.81        0.0450
                   21.00        147.50        0.0450
                   24.00        147.26        0.0350      Main Channel
                   27.00        146.88        0.0350      Main Channel
                   30.00        146.72        0.0350      Main Channel
                   33.00        147.27    0.0350 /0.0450  Main Channel
                   36.00        147.60        0.0450
                   39.00        147.71        0.0450
                   42.00        148.10        0.0450
                   45.00        148.90        0.0450
                   48.00        149.05        0.0450
                   51.00        149.12        0.0450
                   54.00        149.43        0.0450
                   57.00        149.67        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14   146.85    .156E+03       0.1         0.30      40.24
        0.27   146.99    .583E+03       0.4         0.51      23.51
        0.41   147.13    .119E+04       1.1         0.68      17.78
        0.54   147.26    .198E+04       2.2         0.82      14.76
        0.69   147.41    .309E+04       4.3         1.02      11.88
        0.84   147.56    .455E+04       7.2         1.15      10.50
        0.98   147.70    .637E+04      10.9         1.24       9.73
        1.13   147.85    .862E+04      15.8         1.32       9.12
        1.28   148.00    .111E+05      21.7         1.41       8.55
        1.42   148.14    .139E+05      28.7         1.50       8.06
        1.57   148.29    .169E+05      37.1         1.59       7.58
        1.72   148.44    .200E+05      46.5         1.68       7.16
        1.87   148.58    .233E+05      57.0         1.77       6.80
        2.01   148.73    .268E+05      68.3         1.85       6.53
        2.16   148.88    .305E+05      80.9         1.92       6.28
        2.31   149.02    .345E+05      93.2         1.95       6.17
        2.45   149.17    .391E+05     106.6         1.97       6.11
        2.60   149.32    .441E+05     123.2         2.02       5.97
        2.75   149.47    .495E+05     139.7         2.04       5.91

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.  MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    14.77    6.08  28.60      1.10      1.30
   OUTFLOW: ID= 1 ( 60250)  271.19    12.47    6.17  28.59      1.03      1.26



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.93        12.52
     Dep. Storage     (mm)=       2.00         6.70
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     435.49        46.00
     Mannings n           =      0.015        0.300

     Max.Eff.Inten.(mm/hr)=      63.34        38.89
                   over (min)     5.00        25.00
     Storage Coeff.  (min)=      7.47 (ii)   21.68 (ii)
     Unit Hyd. Tpeak (min)=      5.00        25.00
     Unit Hyd. peak  (cms)=      0.17         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=      1.96         0.63        2.311 (iii)
     TIME TO PEAK    (hrs)=      6.00         6.25        6.00
     RUNOFF VOLUME    (mm)=     46.07        19.19       30.75
     TOTAL RAINFALL   (mm)=     48.07        48.07       48.07
     RUNOFF COEFFICIENT   =      0.96         0.40        0.64
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09793>
09794>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
09795>             CN*  =  78.7    Ia = Dep. Storage  (Above)
09796>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
09797>            THAN THE STORAGE COEFFICIENT.
09798>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
09799>
09800> ---------------------------------------------------------------------------
09801>
09802> --------------------
09803> | ADD HYD  ( 50260)|
09804> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
09805> --------------------         (ha)    (cms)    (hrs)     (mm)
09806>         ID1= 1 ( 40260):    28.45   2.311     6.00    30.75
09807>       + ID2= 2 ( 60250):   271.19  12.475     6.17    28.59
09808>         ====================================================
09809>         ID = 3 ( 50260):   299.64  13.781     6.17    28.80
09810>
09811>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09812> ---------------------------------------------------------------------------
09813> --------------------
09814> | ROUTE CHN( 60260)|
09815> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
09816> --------------------
09817>                <------ DATA FOR SECTION (   1.1) ------>
09818>                Distance      Elevation       Manning
09819>                    0.00         143.17        0.0450
09820>                    4.00         143.15        0.0450
09821>                    8.00         143.14        0.0450
09822>                   12.00         142.95        0.0450
09823>                   16.00         142.87        0.0450
09824>                   20.00         142.67        0.0450
09825>                   24.00         142.24        0.0450
09826>                   28.00         141.84        0.0450
09827>                   32.00         141.61        0.0450
09828>                   36.00         141.32        0.0450
09829>                   40.00         140.98        0.0450
09830>                   44.00         140.88        0.0450
09831>                   48.00         139.95        0.0350      Main Channel
09832>                   52.00         140.09        0.0350      Main Channel
09833>                   56.00         141.11        0.0450
09834>                   60.00         141.43        0.0450
09835>                   76.00         143.21        0.0450
09836>
09837>       <--------------------- TRAVEL TIME TABLE ---------------------->
09838>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
09839>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
09840>         0.17   140.12    .479E+03        0.2         0.48      36.89
09841>         0.34   140.29    .147E+04        1.2         0.86      20.63
09842>         0.51   140.46    .272E+04        2.9         1.12      15.78
09843>         0.68   140.63    .421E+04        5.3         1.33      13.28
09844>         0.85   140.80    .596E+04        8.5         1.51      11.69
09845>         1.02   140.97    .812E+04       12.0         1.56      11.29
09846>         1.19   141.14    .111E+05       17.6         1.68      10.52
09847>         1.36   141.31    .147E+05       25.4         1.83       9.67
09848>         1.53   141.48    .191E+05       34.9         1.93       9.14
09849>         1.70   141.65    .242E+05       46.4         2.03       8.71
09850>         1.87   141.81    .301E+05       59.9         2.11       8.38
09851>         2.04   141.98    .367E+05       76.6         2.21       7.99
09852>         2.21   142.15    .439E+05       95.9         2.31       7.63
09853>         2.37   142.32    .517E+05      117.9         2.42       7.30
09854>         2.54   142.49    .600E+05      142.7         2.52       7.01
09855>         2.71   142.66    .689E+05      170.3         2.62       6.74
09856>         2.88   142.83    .785E+05      198.2         2.68       6.60
09857>         3.05   143.00    .892E+05      225.9         2.68       6.58
09858>         3.22   143.17    .101E+06      250.7         2.63       6.73
09859>
09860>                                    <---- hydrograph ---->   <-pipe / channel->
09861>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
09862>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
09863>    INFLOW : ID= 2 ( 50260)  299.64    13.78    6.17  28.80      1.07      1.60
09864>    OUTFLOW: ID= 1 ( 60260)  299.64    11.82    6.33  28.80      1.01      1.56
09865>
09866>
09867>
09868> ---------------------------------------------------------------------------
09869> --------------------
09870> | CALIB            |
09871> | STANDHYD ( 40270)|   Area    (ha)=   9.83
09872> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
09873> --------------------
09874>                              IMPERVIOUS    PERVIOUS (i)
09875>      Surface Area     (ha)=       3.12         6.71
09876>      Dep. Storage     (mm)=       2.00         8.03
09877>      Average Slope     (%)=       1.10         1.10
09878>      Length            (m)=     256.01        73.00
09879>      Mannings n             =     0.015        0.330
09880>
09881>      Max.Eff.Inten.(mm/hr)=      63.34        19.32
09882>                    over (min)        5.00        35.00
09883>      Storage Coeff.  (min)=       5.71 (ii)   33.33 (ii)
09884>      Unit Hyd. Tpeak (min)=       5.00        35.00
09885>      Unit Hyd. peak  (cms)=       0.20         0.03
09886>                                                          *TOTALS*
09887>      PEAK FLOW       (cms)=       0.36         0.21          0.441 (iii)
09888>      TIME TO PEAK    (hrs)=       6.00         6.50          6.00
09889>      RUNOFF VOLUME    (mm)=      46.07        17.86         24.07
09890>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
09891>      RUNOFF COEFFICIENT   =       0.96         0.37          0.50
09892>
09893>
09894>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
09895>             CN*  =  80.7    Ia = Dep. Storage  (Above)
09896>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
09897>            THAN THE STORAGE COEFFICIENT.
09898>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
09899>
09900> ---------------------------------------------------------------------------
09901>
09902> --------------------
09903> | ADD HYD  ( 50270)|
09904> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
09905> --------------------         (ha)    (cms)    (hrs)     (mm)
09906>         ID1= 1 ( 40270):     9.83   0.441     6.00    24.07
09907>       + ID2= 2 ( 60260):   299.64  11.816     6.33    28.80
09908>         ====================================================
09909>         ID = 3 ( 50270):   309.47  12.070     6.33    28.65
09910>
09911>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09912> ---------------------------------------------------------------------------
09913> --------------------
09914> | CALIB            |
09915> | STANDHYD ( 40280)|   Area    (ha)=  31.30
09916> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
09917> --------------------
09918>                              IMPERVIOUS    PERVIOUS (i)
09919>      Surface Area     (ha)=      20.16        11.14
09920>      Dep. Storage     (mm)=       2.00         7.27
09921>      Average Slope     (%)=       1.10         1.10
09922>      Length            (m)=     456.83        53.00
09923>      Mannings n             =     0.015        0.310
09924>
09925>      Max.Eff.Inten.(mm/hr)=      63.34        31.63
09926>                    over (min)       10.00        30.00
09927>      Storage Coeff.  (min)=       8.08 (ii)   26.11 (ii)
09928>      Unit Hyd. Tpeak (min)=       10.00        30.00
09929>      Unit Hyd. peak  (cms)=       0.13         0.04
09930>                                                          *TOTALS*
09931>      PEAK FLOW       (cms)=       2.39         0.49          2.623 (iii)
09932>      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
09933>      RUNOFF VOLUME    (mm)=      46.07        18.38         32.68
09934>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
09935>      RUNOFF COEFFICIENT   =       0.96         0.38          0.68
09936>
09937>
09938>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
09939>             CN*  =  76.8    Ia = Dep. Storage  (Above)
09940>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
09941>            THAN THE STORAGE COEFFICIENT.
09942>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
09943>
09944> ---------------------------------------------------------------------------
09945>
09946> --------------------
09947> | ADD HYD  ( 50280)|
09948> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
09949> --------------------         (ha)    (cms)    (hrs)     (mm)
09950>         ID1= 1 ( 40280):    31.30   2.623     6.00    32.68
09951>       + ID2= 2 ( 50270):   309.47  12.070     6.33    28.65
09952>         ====================================================
09953>         ID = 3 ( 50280):   340.77  13.364     6.25    29.02
09954>
09955>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09956> ---------------------------------------------------------------------------
09957> --------------------
09958> | ROUTE CHN( 60280)|
09959> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
09960> --------------------
09961>                <------ DATA FOR SECTION (   1.1) ------>
09962>                Distance      Elevation       Manning
09963>                    0.00         139.35        0.0450
09964>                    3.00         139.19        0.0450
09965>                    6.00         138.46        0.0450
09966>                   27.00         137.71        0.0450
09967>                   30.00         137.44        0.0350      Main Channel
09968>                   33.00         137.26        0.0350      Main Channel
09969>                   36.00         137.51        0.0350      Main Channel
09970>                   39.00         137.64    0.0350 /0.0450  Main Channel
09971>                   42.00         137.71        0.0450
09972>                   57.00         139.35        0.0450
09973>
09974>       <--------------------- TRAVEL TIME TABLE ---------------------->
09975>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
09976>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
09977>         0.09   137.35    .361E+02        0.0         0.30      17.09
09978>         0.18   137.44    .145E+03        0.2         0.48      10.76
09979>         0.30   137.55    .369E+03        0.8         0.68       7.57
09980>         0.41   137.67    .717E+03        1.9         0.82       6.28
09981>         0.52   137.78    .124E+04        3.9         0.97       5.27
09982>         0.63   137.89    .192E+04        6.8         1.10       4.67
09983>         0.74   138.00    .273E+04       10.7         1.20       4.25
09984>         0.86   138.11    .369E+04       15.7         1.30       3.93
09985>         0.97   138.23    .480E+04       21.8         1.39       3.67
09986>         1.08   138.34    .605E+04       29.1         1.48       3.46
09987>         1.19   138.45    .745E+04       37.8         1.56       3.28
09988>         1.31   138.56    .895E+04       48.6         1.67       3.07
09989>         1.42   138.68    .105E+05       60.8         1.78       2.88
09990>         1.53   138.79    .121E+05       74.4         1.89       2.71
09991>         1.64   138.90    .138E+05       89.3         1.99       2.57
09992>         1.76   139.01    .155E+05      105.5         2.10       2.44
09993>         1.87   139.13    .172E+05      123.0         2.19       2.33
09994>         1.98   139.24    .190E+05      140.8         2.27       2.25
09995>         2.09   139.35    .209E+05      159.0         2.33       2.20
09996>
09997>                                    <---- hydrograph ---->   <-pipe / channel->
09998>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
09999>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
10000>    INFLOW : ID= 2 ( 50280)  340.77    13.36    6.25  29.02      0.80      1.25
10001>    OUTFLOW: ID= 1 ( 60280)  340.77    13.24    6.33  29.02      0.80      1.25
10002>
10003>
10004>
10005> ---------------------------------------------------------------------------
10006> --------------------
10007> | CALIB            |
10008> | STANDHYD ( 40300)|   Area    (ha)=  11.53
10009> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
10010> --------------------
10011>                              IMPERVIOUS    PERVIOUS (i)
10012>      Surface Area     (ha)=       6.71         4.81
10013>      Dep. Storage     (mm)=       2.00         7.99
10014>      Average Slope     (%)=       1.60         1.60
10015>      Length            (m)=     277.19        63.00
10016>      Mannings n             =     0.015        0.340
10017>
10018>      Max.Eff.Inten.(mm/hr)=      63.34        28.95
10019>                    over (min)        5.00        25.00
10020>      Storage Coeff.  (min)=       5.35 (ii)   24.92 (ii)
10021>      Unit Hyd. Tpeak (min)=       5.00        25.00
10022>      Unit Hyd. peak  (cms)=       0.21         0.05
10023>                                                          *TOTALS*
10024>      PEAK FLOW       (cms)=       0.88         0.20          0.987 (iii)
10025>      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
10026>      RUNOFF VOLUME    (mm)=      46.07        17.36         30.27
10027>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
10028>      RUNOFF COEFFICIENT   =       0.96         0.36          0.63
10029>
10030>
10031>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
10032>             CN*  =  76.3    Ia = Dep. Storage  (Above)
10033>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
10034>            THAN THE STORAGE COEFFICIENT.
10035>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
10036>
10037> ---------------------------------------------------------------------------
10038>
10039> --------------------
10040> | ADD HYD  ( 50300)|
10041> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
10042> --------------------         (ha)    (cms)    (hrs)     (mm)
10043>         ID1= 1 ( 40300):    11.53   0.987     6.00    30.27
10044>       + ID2= 2 ( 60280):   340.77  13.242     6.33    29.02
10045>         ====================================================
10046>         ID = 3 ( 50300):   352.30  13.589     6.33    29.06
10047>
10048>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
10049> ---------------------------------------------------------------------------
10050> --------------------
10051> | ROUTE CHN( 60300)|
10052> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
10053> --------------------
10054>                <------ DATA FOR SECTION (   1.1) ------>
10055>                Distance      Elevation       Manning
10056>                    0.00         137.26        0.0450
10057>                    4.00         136.94        0.0450
10058>                    8.00         136.82        0.0450
10059>                   12.00         136.69        0.0450
10060>                   16.00         136.55        0.0450
10061>                   36.00         135.52        0.0350      Main Channel
10062>                   64.00         136.21        0.0450
10063>                   75.00         136.49        0.0450
10064>                   84.00         137.21        0.0450
10065>
10066>       <--------------------- TRAVEL TIME TABLE ---------------------->
10067>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
10068>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
10069>         0.09   135.61    .491E+02        0.1         0.26      12.99
10070>         0.18   135.70    .196E+03        0.4         0.42       8.18
10071>         0.27   135.79    .442E+03        1.2         0.55       6.24
10072>         0.36   135.88    .785E+03        2.5         0.66       5.15
10073>         0.45   135.97    .123E+04        4.6         0.77       4.44
10074>         0.53   136.06    .177E+04        7.5         0.87       3.93
10075>         0.62   136.15    .240E+04       11.3         0.96       3.55
10076>         0.71   136.24    .314E+04       16.4         1.07       3.19
10077>         0.80   136.32    .397E+04       23.3         1.20       2.84
10078>         0.89   136.41    .490E+04       31.4         1.32       2.60
10079>         0.98   136.50    .592E+04       40.8         1.42       2.41
10080>         1.07   136.59    .701E+04       51.5         1.51       2.27
10081>         1.16   136.68    .816E+04       63.4         1.59       2.14
10082>         1.25   136.77    .938E+04       76.6         1.67       2.04
10083>         1.34   136.86    .107E+05       91.2         1.75       1.95
10084>         1.42   136.95    .120E+05      107.3         1.83       1.87
10085>         1.51   137.04    .135E+05      125.8         1.91       1.78
10086>         1.60   137.13    .149E+05      145.6         2.00       1.71
10087>         1.69   137.22    .164E+05      166.8         2.08       1.64
10088>
10089>                                    <---- hydrograph ---->   <-pipe / channel->
10090>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
10091>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
10092>    INFLOW : ID= 2 ( 50300)  352.30    13.59    6.33  29.06      0.66      1.01
10093>    OUTFLOW: ID= 1 ( 60300)  352.30    13.46    6.33  29.06      0.66      1.01
10094>
10095>
10096>
10097> ---------------------------------------------------------------------------
10098> --------------------
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| CALIB            |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77         6.39
     Dep. Storage     (mm)=       2.00         8.38
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     247.21        43.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      63.34        28.38
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.06 (ii)   17.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.37         0.27          0.547 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      46.07        16.49          23.45
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.34           0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17   0.547     6.00    23.45
      + ID2= 2 ( 60300):   352.30  13.456     6.33    29.06
        ================================================
        ID = 3 ( 50340):   361.46  13.730     6.33    28.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   346.28   6.902     6.25    28.80
      + ID2= 2 ( 50340):   361.46  13.730     6.33    28.92
        ================================================
        ID = 3 ( 50350):   707.75  20.255     6.33    28.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation      Manning
                   0.00         134.05       0.0450
                  24.00         133.67       0.0450
                  30.00         131.85       0.0450
                  36.00         131.42       0.0450
                  42.00         130.48       0.0450
                  48.00         130.42       0.0350      Main Channel
                  54.00         130.42       0.0350      Main Channel
                  60.00         130.62       0.0450
                  66.00         130.77       0.0450
                  72.00         131.03       0.0450
                  78.00         131.43       0.0450
                  84.00         131.38       0.0450
                  90.00         131.33       0.0450
                  96.00         131.98       0.0450
                 102.00         133.31       0.0450
                 120.00         133.95       0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   130.42    .133E+02       0.0         0.03     768.63
        0.19   130.61    .383E+04       1.6         0.61      40.07
        0.37   130.79    .994E+04       6.6         0.97      25.18
        0.56   130.98    .179E+05      15.1         1.23      19.81
        0.75   131.16    .272E+05      27.2         1.46      16.72
        0.93   131.35    .377E+05      42.2         1.64      14.88
        1.12   131.54    .521E+05      60.9         1.71      14.26
        1.30   131.72    .683E+05      87.2         1.86      13.07
        1.49   131.91    .857E+05     119.1         2.03      11.99
        1.68   132.09    .104E+06     157.8         2.22      10.96
        1.86   132.28    .122E+06     201.6         2.41      10.11
        2.05   132.47    .141E+06     250.1         2.59       9.41
        2.23   132.65    .160E+06     303.1         2.76       8.82
        2.42   132.84    .180E+06     360.6         2.93       8.32
        2.61   133.02    .200E+06     422.5         3.08       7.90
        2.79   133.21    .221E+06     488.7         3.24       7.53
        2.98   133.40    .242E+06     552.2         3.34       7.29
        3.16   133.58    .264E+06     613.6         3.40       7.17
        3.35   133.77    .288E+06     658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    20.26    6.33  28.86      0.64      1.32
   OUTFLOW: ID= 1 ( 60350)  707.75    18.03    6.50  28.85      0.61      1.28


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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.03   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.059 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.471
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.116 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.478
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.340

     PEAK FLOW       (cms)=   0.131 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.483
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.67   0.131     6.17    21.48
      + ID2= 2 (******):     2.22   0.116     6.17    21.48
        ================================================
        ID = 3 (******):     4.89   0.247     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):      4.89      0.25      6.17   21.48
     ================================================
     ID= 2  (   2)    :      2.44      0.12      6.17   21.48
     ID= 3  (   2)    :      2.44      0.12      6.17   21.48
     ID= 4  (   2)    :      0.00      0.00      0.00    0.00
     ID= 5  (   2)    :      0.00      0.00      0.00    0.00
     ID= 6  (   2)    :      0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.059     6.08    21.47
      + ID2= 2 (******):     2.44   0.123     6.17    21.48
        ================================================
        ID = 3 (******):     3.48   0.180     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.15   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.480

     PEAK FLOW       (cms)=   0.189 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.485
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.020 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.329
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.444

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.15   0.189     6.17    21.49
      + ID2= 2 (******):     0.26   0.020     6.00    21.33
        ================================================
        ID = 3 (******):     4.41   0.202     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.41   0.202     6.17    21.48
      + ID2= 2 (******):     3.48   0.180     6.17    21.48
        ================================================
        ID = 1 (******):     7.89   0.382     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.78   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.199

     PEAK FLOW       (cms)=   0.059 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.367
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.444

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.14   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.292

     PEAK FLOW       (cms)=   0.110 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.480
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21
```

```
      Unit Hyd Qpeak  (cms)=   0.122

      PEAK FLOW       (cms)=   0.042 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  21.457
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.446

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.47   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

      Unit Hyd Qpeak  (cms)=   0.170

      PEAK FLOW       (cms)=   0.067 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  21.485
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.447

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.67   0.042     6.08    21.46
      + ID2= 2 (******):     2.14   0.110     6.17    21.48
        ================================================
        ID = 3 (******):     2.81   0.148     6.08    21.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     2.81   0.148     6.08    21.47
      + ID2= 2 (******):     0.78   0.059     6.00    21.37
        ================================================
        ID = 1 (******):     3.59   0.202     6.08    21.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     3.59   0.202     6.08    21.45
      + ID2= 2 (******):     1.47   0.067     6.17    21.49
        ================================================
        ID = 3 (******):     5.06   0.264     6.08    21.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     7.89   0.382     6.17    21.48
      + ID2= 2 (******):     5.06   0.264     6.08    21.46
        ================================================
        ID = 3 ( 50360):    12.95   0.635     6.17    21.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50360):    12.95   0.635     6.17    21.47
      + ID2= 2 ( 60350):   707.75  18.034     6.50    28.85
        ================================================
        ID = 1 ( 50360):   720.69  18.421     6.50    28.72

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.30        0.0450
                   6.00         127.39        0.0450
                  12.00         127.46        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04        0.0450
                  72.00         123.15        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)       (cms)        (m/s)      (min)
         0.09  122.98    .246E+03         0.4         0.31      10.02
         0.33  123.21    .251E+04        11.8         0.86       3.57
         0.56  123.45    .538E+04        39.9         1.37       2.25
         0.80  123.68    .842E+04        81.1         1.78       1.73
         1.04  123.92    .116E+05       134.5         2.13       1.44
         1.27  124.16    .150E+05       200.0         2.46       1.25
         1.51  124.39    .185E+05       278.3         2.78       1.11
         1.74  124.63    .220E+05       367.4         3.08       1.00
         1.98  124.86    .257E+05       466.7         3.35       0.92
         2.22  125.10    .294E+05       576.1         3.61       0.85
         2.45  125.34    .332E+05       695.4         3.86       0.80
         2.69  125.57    .371E+05       824.8         4.10       0.75
         2.92  125.81    .410E+05       963.8         4.33       0.71
         3.16  126.04    .451E+05      1112.3         4.55       0.68
         3.39  126.28    .492E+05      1270.1         4.76       0.65
         3.63  126.51    .534E+05      1437.3         4.97       0.62
         3.87  126.75    .576E+05      1613.7         5.16       0.60
         4.10  126.99    .620E+05      1791.1         5.33       0.58
         4.34  127.22    .665E+05      1970.4         5.47       0.56

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)  720.69    18.42     6.50  28.72       0.38      0.94
   OUTFLOW: ID= 1 ( 60390)  720.69    18.33     6.58  28.72       0.38      0.94


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

      Unit Hyd Qpeak  (cms)=   3.925

      PEAK FLOW       (cms)=   1.144 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  18.540
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.386

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40390):    20.55   1.144     6.08    18.54
      + ID2= 2 ( 60390):   720.69  18.333     6.58    28.72
        ================================================
        ID = 3 ( 50390):   741.24  18.749     6.50    28.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------

                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      11.83          6.10
      Dep. Storage     (mm)=       2.00          6.08
      Average Slope     (%)=       1.50          1.50
      Length            (m)=     345.74         42.00
      Mannings n            =      0.015         0.280

      Max.Eff.Inten.(mm/hr)=      63.34         48.69
                    over (min)        5.00         20.00
      Storage Coeff.  (min)=       6.23 (ii)    17.54 (ii)
      Unit Hyd. Tpeak (min)=       5.00         20.00
      Unit Hyd. peak  (cms)=       0.19          0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.55          0.44        1.859 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.17         6.00
      RUNOFF VOLUME    (mm)=      46.07         22.13        34.66
      TOTAL RAINFALL   (mm)=      48.07         48.07        48.07
      RUNOFF COEFFICIENT   =       0.96          0.46         0.72

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.70        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04    0.0450 /0.0350  Main Channel
                  72.00         122.86        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)       (cms)        (m/s)      (min)
         0.12  122.98    .275E+03         0.7         0.35       6.78
         0.36  123.21    .218E+04        14.7         0.95       2.47
         0.59  123.45    .437E+04        44.6         1.44       1.63
         0.83  123.68    .670E+04        87.2         1.84       1.28
         1.06  123.92    .916E+04       141.6         2.19       1.08
         1.30  124.16    .117E+05       208.1         2.51       0.94
         1.54  124.39    .144E+05       287.0         2.82       0.84
         1.77  124.63    .171E+05       376.7         3.11       0.76
         2.01  124.86    .199E+05       476.5         3.38       0.70
         2.24  125.10    .228E+05       586.1         3.64       0.65
         2.48  125.33    .257E+05       705.6         3.88       0.61
         2.71  125.57    .287E+05       835.1         4.12       0.57
         2.95  125.80    .317E+05       974.0         4.35       0.54
         3.19  126.04    .348E+05      1122.3         4.56       0.52
         3.42  126.28    .379E+05      1279.8         4.77       0.49
         3.66  126.51    .411E+05      1446.6         4.97       0.47
         3.89  126.75    .444E+05      1622.6         5.17       0.46
         4.13  126.98    .477E+05      1786.6         5.29       0.45
         4.36  127.22    .513E+05      1942.9         5.36       0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     1.86     6.00  34.66       0.14      0.37
   OUTFLOW: ID= 1 ( 60370)   17.93     1.52     6.08  34.66       0.14      0.36


--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50390):   741.24  18.749     6.50    28.44
      + ID2= 2 ( 60370):    17.93   1.516     6.08    34.66
        ================================================
        ID = 3 ( 50400):   759.17  19.356     6.50    28.58

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         125.01        0.0450
                  20.00         123.70        0.0450
                  25.00         123.04        0.0450
                  30.00         120.84        0.0450
                  35.00         119.81    0.0450 /0.0350  Main Channel
                  40.00         119.74        0.0350      Main Channel
                  65.00         120.12        0.0450
                  90.00         120.58        0.0450
                 100.00         125.02        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)       (cms)        (m/s)      (min)
         0.07  119.81    .209E+03         0.1         0.27      34.81
         0.35  120.09    .326E+04         4.7         0.83      11.50
         0.62  120.36    .916E+04        21.3         1.34       7.16
         0.90  120.63    .176E+05        51.5         1.68       5.69
         1.17  120.91    .270E+05        96.6         2.05       4.67
         1.44  121.18    .367E+05       153.8         2.41       3.98
         1.72  121.46    .466E+05       222.1         2.74       3.50
         1.99  121.73    .567E+05       300.7         3.05       3.14
         2.26  122.00    .669E+05       389.1         3.34       2.87
```

```
        2.54   122.28    .774E+05     487.1          3.62       2.65
        2.81   122.55    .880E+05     594.2          3.88       2.47
        3.09   122.82    .988E+05     710.4          4.13       2.32
        3.36   123.10    .110E+06     834.4          4.36       2.20
        3.63   123.37    .121E+06     964.4          4.57       2.10
        3.91   123.65    .133E+06    1104.4          4.76       2.01
        4.18   123.92    .145E+06    1250.0          4.93       1.94
        4.45   124.19    .159E+06    1406.7          5.09       1.88
        4.73   124.47    .172E+06    1575.5          5.25       1.82
        5.00   124.74    .187E+06    1756.1          5.39       1.77

                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50400)  759.17    19.36    6.50  28.58      0.59      1.25
    OUTFLOW: ID= 1 ( 60400)  759.17    19.32    6.58  28.58      0.59      1.24


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area     (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      63.34         9.00
                 over (min)       5.00       140.00
     Storage Coeff.  (min)=       5.35 (ii)  139.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00       140.00
     Unit Hyd. peak  (cms)=       0.21         0.01
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.34         0.04          0.338 (iii)
     TIME TO PEAK    (hrs)=       6.00         8.25          6.00
     RUNOFF VOLUME    (mm)=      46.07        14.37         22.31
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.30          0.46

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40410):     7.92   0.338     6.00     22.31
      + ID2= 2 ( 60400):   759.17  19.323     6.58     28.58
        ================================================
        ID = 3 ( 50410):   767.09  19.367     6.58     28.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.113 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.034 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.449
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.061 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.463
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   6.75   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.37

     Unit Hyd Qpeak  (cms)=   0.697

     PEAK FLOW       (cms)=   0.285 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  21.488
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     6.75   0.285     6.25     21.49
      + ID2= 2 (******):     1.01   0.061     6.08     21.46
        ================================================
        ID = 3 (******):     7.76   0.334     6.17     21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.115 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.476
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.169

     PEAK FLOW       (cms)=   0.063 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.480
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.24   0.063     6.17     21.48
      + ID2= 2 (******):     2.16   0.115     6.08     21.48
        ================================================
        ID = 3 (******):     3.40   0.178     6.17     21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     3.40   0.178     6.17     21.48
      + ID2= 2 (******):     7.76   0.334     6.17     21.48
        ================================================
        ID = 1 (******):    11.16   0.512     6.17     21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.68   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.131 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.483
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.045 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.450
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.041 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.429
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.61   0.041     6.08     21.43
      + ID2= 2 (******):     2.44   0.123     6.17     21.48
        ================================================
        ID = 3 (******):     3.06   0.160     6.08     21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.95   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.158

     PEAK FLOW       (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.071 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.474
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.28   0.071     6.08     21.47
      + ID2= 2 (******):     0.95   0.056     6.08     21.47
```

```
                ==============================================
        ID = 3 (******):     2.23   0.126     6.08    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.23   0.126     6.08    21.47
      + ID2= 2 (******):     0.71   0.045     6.08    21.45
        ==============================================
        ID = 1 (******):     2.94   0.172     6.08    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.94   0.172     6.08    21.47
      + ID2= 2 (******):     1.92   0.113     6.08    21.47
        ==============================================
        ID = 3 (******):     4.86   0.285     6.08    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.86   0.285     6.08    21.47
      + ID2= 2 (******):     0.54   0.034     6.08    21.45
        ==============================================
        ID = 1 (******):     5.40   0.319     6.08    21.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.40   0.319     6.08    21.46
      + ID2= 2 (******):     2.68   0.131     6.17    21.48
        ==============================================
        ID = 3 (******):     8.08   0.444     6.08    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     8.08   0.444     6.08    21.47
      + ID2= 2 (******):     3.06   0.160     6.08    21.47
        ==============================================
        ID = 1 (******):    11.13   0.604     6.08    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   0.604     6.08    21.47
      + ID2= 2 (******):    11.16   0.512     6.17    21.48
        ==============================================
        ID = 3 (******):    22.30   1.098     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.197

     PEAK FLOW       (cms)=   0.071 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.471
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.174

     PEAK FLOW       (cms)=   0.062 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  18.31   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

     Unit Hyd Qpeak  (cms)=   1.457

     PEAK FLOW       (cms)=   0.639 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  21.490
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.05   0.062     6.08    21.47
      + ID2= 2 (******):    18.31   0.639     6.33    21.49
        ==============================================
        ID = 3 (******):    19.36   0.679     6.33    21.49

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    19.36   0.679     6.33    21.49
      + ID2= 2 (******):     1.24   0.071     6.08    21.47
        ==============================================
        ID = 1 (******):    20.60   0.727     6.33    21.49

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    22.30   1.098     6.17    21.48
      + ID2= 2 (******):    20.60   0.727     6.33    21.49
        ==============================================
        ID = 3 (******):    42.90   1.780     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area     (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------

                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       20.95         46.62
     Dep. Storage     (mm)=        2.00          7.70
     Average Slope     (%)=        1.90          1.90
     Length            (m)=      671.17         89.00
     Mannings n             =     0.015         0.240

     Max.Eff.Inten.(mm/hr)=       63.34         24.25
                   over (min)     10.00         30.00
     Storage Coeff.  (min)=        8.64 (ii)    28.56 (ii)
     Unit Hyd. Tpeak (min)=       10.00         30.00
     Unit Hyd. peak  (cms)=        0.12          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        2.45          1.50          3.135 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.42           6.08
     RUNOFF VOLUME    (mm)=       46.07         17.54          24.67
     TOTAL RAINFALL   (mm)=       48.07         48.07          48.07
     RUNOFF COEFFICIENT   =        0.96          0.36           0.51

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):     67.57   3.135     6.08    24.67
      + ID2= 2 (******):     42.90   1.780     6.17    21.48
        ==============================================
        ID = 3 (******):    110.47   4.816     6.08    23.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):    767.09  19.367     6.58    28.52
      + ID2= 2 (******):    110.47   4.816     6.08    23.43
        ==============================================
        ID = 3 ( 50420):    877.56  22.372     6.50    27.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         121.79         0.0450
                  12.00         116.08         0.0450
                  40.00         115.59    0.0450 /0.0350  Main Channel
                  44.00         114.89         0.0350      Main Channel
                  48.00         114.52         0.0350      Main Channel
                  52.00         115.72    0.0350 /0.0450  Main Channel
                  56.00         115.93         0.0450
                  60.00         117.24         0.0450
                  64.00         119.04         0.0450
                  68.00         120.69         0.0450
                  72.00         121.01         0.0450
                  74.00         121.49         0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
         0.36  114.88    .645E+03         0.7         0.83       14.38
         0.71  115.23    .236E+04         4.6         1.41        8.47
         1.07  115.59    .489E+04        12.6         1.84        6.48
         1.44  115.96    .112E+05        30.9         1.97        6.04
         1.80  116.33    .227E+05        69.1         2.17        5.49
         2.17  116.70    .351E+05       125.6         2.56        4.65
         2.54  117.06    .479E+05       197.5         2.95        4.04
         2.91  117.43    .612E+05       283.9         3.32        3.59
         3.28  117.80    .749E+05       384.1         3.66        3.25
         3.65  118.17    .891E+05       497.4         3.99        2.99
         4.02  118.54    .104E+06       623.5         4.30        2.77
         4.39  118.91    .119E+06       762.2         4.59        2.60
         4.76  119.28    .134E+06       913.1         4.87        2.45
         5.13  119.65    .150E+06      1076.2         5.13        2.32
         5.49  120.02    .166E+06      1251.7         5.38        2.21
         5.86  120.39    .183E+06      1439.5         5.62        2.12
         6.23  120.75    .200E+06      1634.3         5.84        2.04
         6.60  121.12    .219E+06      1831.3         5.99        1.99
         6.97  121.49    .238E+06      2058.5         6.20        1.92

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50420)  877.56    22.37    6.50  27.88      1.26      1.91
   OUTFLOW: ID= 1 ( 60420)  877.56    21.98    6.58  27.88      1.26      1.90


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area     (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------

                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       21.41         11.03
     Dep. Storage     (mm)=        2.00          7.80
     Average Slope     (%)=        3.50          3.50
     Length            (m)=      465.00        102.00
     Mannings n             =     0.015         0.320

     Max.Eff.Inten.(mm/hr)=       63.34         18.10
                   over (min)      5.00         30.00
     Storage Coeff.  (min)=        5.77 (ii)    29.81 (ii)
     Unit Hyd. Tpeak (min)=        5.00         30.00
     Unit Hyd. peak  (cms)=        0.20          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.47          0.31          3.607 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.42           6.00
     RUNOFF VOLUME    (mm)=       46.07         16.04          35.26
     TOTAL RAINFALL   (mm)=       48.07         48.07          48.07
     RUNOFF COEFFICIENT   =        0.96          0.33           0.73

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50430)|
```

```
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
|--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   3.607     6.00    35.26
      + ID2= 2 ( 60420):   877.56  21.985     6.58    27.88
        ==================================================
        ID = 3 ( 50430):   909.99  22.590     6.58    28.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

<-------- DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	116.29	0.0450	
20.00	114.05	0.0450	
25.00	110.83	0.0450	
30.00	109.36	0.0450	
35.00	108.23	0.0450 /0.0350	Main Channel
40.00	107.52	0.0350	Main Channel
45.00	108.00	0.0350 /0.0450	Main Channel
50.00	107.84	0.0450	
55.00	108.21	0.0450	
60.00	108.95	0.0450	
65.00	109.35	0.0450	
70.00	109.41	0.0450	
75.00	109.48	0.0450	
80.00	109.77	0.0450	
85.00	112.20	0.0450	
90.00	115.48	0.0450	
100.00	116.29	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.24	107.76	.285E+03	0.4	0.74	12.74
0.48	108.00	.146E+04	2.6	1.01	9.32
0.97	108.49	.695E+04	23.3	1.90	4.97
1.46	108.97	.141E+05	64.5	2.60	3.63
1.94	109.46	.233E+05	116.9	2.84	3.33
2.43	109.95	.371E+05	214.6	3.28	2.88
2.92	110.44	.519E+05	350.2	3.83	2.47
3.41	110.92	.675E+05	515.9	4.34	2.18
3.89	111.41	.836E+05	711.3	4.82	1.96
4.38	111.90	.100E+06	933.4	5.28	1.79
4.87	112.39	.117E+06	1182.4	5.71	1.65
5.35	112.87	.135E+06	1458.0	6.13	1.54
5.84	113.36	.153E+06	1758.3	6.52	1.45
6.33	113.85	.171E+06	2082.9	6.90	1.37
6.82	114.34	.190E+06	2410.6	7.19	1.31
7.30	114.82	.210E+06	2758.9	7.43	1.27
7.79	115.31	.232E+06	3143.1	7.68	1.23
8.28	115.80	.255E+06	3473.3	7.71	1.23
8.77	116.29	.282E+06	3812.4	7.67	1.23

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50430)	909.99	22.59	6.58	28.14	0.95	1.85
OUTFLOW: ID= 1 (60430)	909.99	22.85	6.58	28.14	0.96	1.86

```
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	37.70	19.42
Dep. Storage	(mm)=	2.00	6.60
Average Slope	(%)=	2.50	2.50
Length	(m)=	617.06	45.00
Mannings n	=	0.015	0.290
Max.Eff.Inten.	(mm/hr)=	63.34	21.72
over	(min)	10.00	25.00
Storage Coeff.	(min)=	7.56 (ii)	21.83 (ii)
Unit Hyd. Tpeak	(min)=	10.00	25.00
Unit Hyd. peak	(cms)=	0.13	0.05

			TOTALS
PEAK FLOW	(cms)=	5.59	0.54	5.872 (iii)
TIME TO PEAK	(hrs)=	6.00	6.25	6.00
RUNOFF VOLUME	(mm)=	46.07	13.76	34.76
TOTAL RAINFALL	(mm)=	48.07	48.07	48.07
RUNOFF COEFFICIENT	=	0.96	0.29	0.72

```
  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
      CN*  =  74.5    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
|--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40440):    57.11   5.872     6.00    34.76
      + ID2= 2 ( 60430):   909.99  22.855     6.58    28.14
        ==================================================
        ID = 3 ( 50440):   967.10  24.097     6.58    28.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

<-------- DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	104.01	0.0450	
10.00	103.90	0.0450	
20.00	103.74	0.0450	
30.00	103.66	0.0450	
40.00	103.60	0.0450	
50.00	102.52	0.0450	
60.00	101.16	0.0450	
70.00	100.60	0.0450	
80.00	100.17	0.0450	
90.00	99.85	0.0450	
100.00	97.89	0.0350	Main Channel
110.00	97.62	0.0350	Main Channel
120.00	99.12	0.0450	
130.00	99.16	0.0450	
140.00	99.36	0.0450	
150.00	99.66	0.0450	
160.00	99.68	0.0450	
180.00	99.76	0.0450	
190.00	104.10	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.27	97.89	.102E+04	1.2	0.77	13.74
0.60	98.21	.381E+04	9.4	1.56	6.74
0.92	98.53	.738E+04	24.3	2.08	5.05
1.24	98.86	.117E+05	46.2	2.50	4.22
1.56	99.18	.171E+05	76.6	2.84	3.71
1.89	99.50	.264E+05	124.5	2.98	3.53
2.21	99.82	.403E+05	189.1	2.96	3.56
2.53	100.15	.597E+05	286.1	3.03	3.48
2.85	100.47	.809E+05	417.7	3.26	3.23
3.17	100.79	.104E+06	580.2	3.53	2.98
3.50	101.11	.128E+06	771.7	3.81	2.77
3.82	101.44	.153E+06	996.3	4.10	2.57
4.14	101.76	.179E+06	1248.4	4.40	2.40
4.46	102.08	.206E+06	1526.4	4.68	2.25
4.79	102.40	.233E+06	1829.8	4.96	2.13
5.11	102.73	.261E+06	2156.4	5.22	2.02
5.43	103.05	.290E+06	2507.0	5.47	1.93
5.75	103.37	.319E+06	2882.7	5.71	1.85
6.08	103.69	.350E+06	3194.7	5.77	1.83

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50440)	967.10	24.10	6.58	28.53	0.91	2.07
OUTFLOW: ID= 1 (60440)	967.10	24.00	6.67	28.53	0.91	2.07

```
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	13.37	17.02
Dep. Storage	(mm)=	2.00	6.90
Average Slope	(%)=	0.80	0.80
Length	(m)=	450.16	150.00
Mannings n	=	0.015	0.300
Max.Eff.Inten.	(mm/hr)=	63.34	9.62
over	(min)	10.00	70.00
Storage Coeff.	(min)=	8.81 (ii)	67.25 (ii)
Unit Hyd. Tpeak	(min)=	10.00	70.00
Unit Hyd. peak	(cms)=	0.12	0.02

			TOTALS
PEAK FLOW	(cms)=	1.80	0.25	1.838 (iii)
TIME TO PEAK	(hrs)=	6.00	7.08	6.00
RUNOFF VOLUME	(mm)=	46.07	15.18	27.85
TOTAL RAINFALL	(mm)=	48.07	48.07	48.07
RUNOFF COEFFICIENT	=	0.96	0.32	0.58

```
  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
      CN*  =  77.0    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
|--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40450):    30.40   1.838     6.00    27.85
      + ID2= 2 ( 60440):   967.10  24.002     6.67    28.53
        ==================================================
        ID = 3 ( 50450):   997.50  24.480     6.58    28.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

<-------- DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	97.16	0.0450	
3.00	96.00	0.0450	
6.00	95.32	0.0450	
9.00	94.64	0.0450	
12.00	94.43	0.0450	
15.00	94.29	0.0450	
18.00	94.10	0.0350	Main Channel
21.00	94.02	0.0350	Main Channel
24.00	93.70	0.0350	Main Channel
27.00	94.22	0.0350 /0.0450	Main Channel
30.00	94.90	0.0450	
32.00	95.30	0.0450	
34.00	95.78	0.0450	
36.00	96.25	0.0450	
38.00	96.60	0.0450	
48.00	97.14	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	93.83	.942E+02	0.1	0.39	30.45
0.27	93.96	.377E+03	0.3	0.62	19.18
0.40	94.09	.911E+03	0.9	0.69	17.28
0.59	94.29	.230E+04	3.4	1.06	11.15
0.78	94.48	.428E+04	7.9	1.32	8.98
0.97	94.67	.679E+04	14.6	1.53	7.74
1.16	94.86	.963E+04	23.7	1.75	6.77
1.35	95.05	.127E+05	34.9	1.96	6.07
1.54	95.24	.160E+05	48.1	2.14	5.54
1.73	95.43	.196E+05	63.6	2.31	5.13
1.92	95.62	.233E+05	81.2	2.48	4.79
2.11	95.81	.273E+05	101.0	2.63	4.51
2.30	96.00	.315E+05	123.0	2.78	4.27
2.49	96.19	.360E+05	147.8	2.93	4.06
2.68	96.38	.406E+05	174.6	3.07	3.87
2.87	96.57	.454E+05	203.7	3.20	3.71
3.06	96.76	.505E+05	232.7	3.28	3.62
3.25	96.95	.562E+05	264.9	3.36	3.54
3.44	97.14	.624E+05	300.8	3.43	3.46

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50450)	997.50	24.48	6.58	28.51	1.17	1.77
OUTFLOW: ID= 1 (60450)	997.50	24.10	6.75	28.51	1.17	1.76

```
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	15.36	7.04
Dep. Storage	(mm)=	2.00	6.68
Average Slope	(%)=	2.40	2.40
Length	(m)=	386.43	40.00
Mannings n	=	0.015	0.280
Max.Eff.Inten.	(mm/hr)=	63.34	44.32
over	(min)	5.00	20.00
Storage Coeff.	(min)=	5.78 (ii)	15.69 (ii)
Unit Hyd. Tpeak	(min)=	5.00	20.00
Unit Hyd. peak	(cms)=	0.20	0.07

			TOTALS
PEAK FLOW	(cms)=	1.98	0.45	2.286 (iii)
TIME TO PEAK	(hrs)=	6.00	6.17	6.00
RUNOFF VOLUME	(mm)=	46.07	17.64	32.66
TOTAL RAINFALL	(mm)=	48.07	48.07	48.07
RUNOFF COEFFICIENT	=	0.96	0.37	0.68

```
  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
      CN*  =  72.5    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
|--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40460):    22.40   2.286     6.00    32.66
      + ID2= 2 ( 60450):   997.50  24.097     6.75    28.51
        ==================================================
```

```
         ID = 3 ( 50460):  1019.90  24.413     6.67    28.60

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         91.61        0.0450
                    3.00         91.57        0.0450
                    6.00         91.15        0.0450
                    9.00         90.70        0.0450
                   12.00         89.72        0.0450
                   15.00         88.86        0.0450
                   18.00         88.38    0.0450 /0.0350  Main Channel
                   21.00         87.96        0.0350      Main Channel
                   24.00         88.18    0.0350 /0.0450  Main Channel
                   26.00         88.19        0.0450
                   28.00         88.30        0.0450
                   30.00         90.32        0.0450
                   32.00         90.49        0.0450
                   34.00         90.80        0.0450
                   36.00         90.85        0.0450
                   38.00         90.97        0.0450
                   40.00         91.15        0.0450
                   42.00         91.29        0.0450
                   44.00         91.40        0.0450
                   46.00         91.56        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.11    88.07    .589E+02       0.0         0.34      23.89
        0.21    88.18    .235E+03       0.3         0.54      15.05
        0.41    88.38    .106E+04       1.8         0.85       9.64
        0.61    88.57    .211E+04       5.3         1.22       6.69
        0.81    88.77    .330E+04      10.2         1.51       5.40
        1.01    88.97    .462E+04      16.6         1.76       4.63
        1.21    89.17    .603E+04      24.5         1.99       4.10
        1.41    89.37    .753E+04      33.8         2.19       3.72
        1.61    89.57    .912E+04      44.4         2.38       3.42
        1.81    89.77    .108E+05      56.4         2.56       3.19
        2.00    89.97    .125E+05      69.9         2.72       2.99
        2.20    90.17    .144E+05      84.7         2.88       2.83
        2.40    90.37    .163E+05      99.8         3.00       2.72
        2.60    90.56    .184E+05     114.7         3.04       2.68
        2.80    90.76    .208E+05     132.8         3.13       2.61
        3.00    90.96    .235E+05     148.4         3.09       2.64
        3.20    91.16    .266E+05     170.7         3.13       2.60
        3.40    91.36    .302E+05     194.9         3.16       2.58
        3.60    91.56    .342E+05     223.5         3.20       2.55

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460) 1019.90    24.41    6.67  28.60       1.21      1.98
   OUTFLOW: ID= 1 ( 60460) 1019.90    24.43    6.75  28.60       1.21      1.98


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53         30.66
     Dep. Storage     (mm)=       2.00          5.90
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     775.42         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      63.34         39.01
                   over (min)      10.00         25.00
     Storage Coeff.  (min)=      10.32 (ii)    22.57 (ii)
     Unit Hyd. Tpeak (min)=      10.00         25.00
     Unit Hyd. peak  (cms)=       0.11          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       6.66          1.52        7.516 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25        6.00
     RUNOFF VOLUME    (mm)=      46.07         18.61       33.44
     TOTAL RAINFALL   (mm)=      48.07         48.07       48.07
     RUNOFF COEFFICIENT   =       0.96          0.39        0.70

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40470):    90.19   7.516     6.00     33.44
      + ID2= 2 ( 60460):  1019.90  24.433     6.75     28.60
        ================================================
        ID = 3 ( 50470):  1110.09  26.090     6.75     29.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         89.19        0.0450
                    2.00         88.89        0.0450
                    4.00         88.54        0.0450
                    6.00         88.31        0.0450
                    8.00         88.14        0.0450
                   10.00         88.02        0.0450
                   12.00         87.99        0.0450
                   14.00         87.90        0.0450
                   16.00         87.84        0.0450
                   19.00         87.55        0.0450
                   22.00         86.85        0.0450
                   25.00         86.23        0.0350      Main Channel
                   28.00         86.23        0.0350      Main Channel
                   31.00         86.60        0.0450
                   34.00         87.49        0.0450
                   37.00         88.15        0.0450
                   41.00         88.21        0.0450
                   45.00         88.29        0.0450
                   48.00         88.36        0.0450
                   50.00         89.13        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.01    86.23    .467E+01       0.0         0.03     307.39
        0.16    86.38    .381E+03       0.3         0.45      22.82
        0.31    86.54    .942E+03       1.0         0.65      15.77
        0.46    86.69    .167E+04       2.3         0.85      12.10
        0.61    86.84    .253E+04       4.2         1.03       9.95
        0.77    86.99    .350E+04       6.7         1.18       8.66
        0.92    87.15    .458E+04       9.8         1.32       7.78
        1.07    87.30    .576E+04      13.5         1.44       7.13
        1.22    87.45    .706E+04      17.7         1.54       6.63
        1.38    87.60    .847E+04      22.5         1.63       6.28
        1.53    87.76    .101E+05      27.8         1.69       6.05
        1.68    87.91    .119E+05      33.3         1.72       5.97
        1.83    88.06    .142E+05      39.8         1.72       5.96
        1.99    88.21    .170E+05      47.4         1.71       5.97
        2.14    88.36    .206E+05      57.3         1.71       5.99
        2.29    88.52    .247E+05      70.7         1.76       5.81
        2.44    88.67    .289E+05      86.1         1.83       5.59
        2.60    88.82    .332E+05     103.2         1.91       5.36
        2.75    88.97    .376E+05     121.7         1.99       5.15

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1110.09    26.09    6.75  29.00       1.48      1.67
   OUTFLOW: ID= 1 ( 60470) 1110.09    25.68    6.83  28.99       1.47      1.67


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82         13.61
     Dep. Storage     (mm)=       2.00          5.80
     Average Slope     (%)=       1.90          1.90
     Length            (m)=     613.35         40.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=      63.34         66.64
                   over (min)      10.00         20.00
     Storage Coeff.  (min)=       8.18 (ii)    16.81 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.13          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.90          1.31        5.817 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17        6.00
     RUNOFF VOLUME    (mm)=      46.07         23.60       36.85
     TOTAL RAINFALL   (mm)=      48.07         48.07       48.07
     RUNOFF COEFFICIENT   =       0.96          0.49        0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40480):    56.43   5.817     6.00     36.85
      + ID2= 2 ( 60470):  1110.09  25.683     6.83     28.99
        ================================================
        ID = 3 ( 50480):  1166.52  26.520     6.75     29.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         86.90        0.0450
                    2.00         86.76        0.0450
                    4.00         85.96        0.0450
                    6.00         85.44        0.0450
                    8.00         84.83        0.0450
                   10.00         84.50        0.0450
                   12.00         84.15        0.0450
                   14.00         83.85        0.0350      Main Channel
                   16.00         83.86        0.0350      Main Channel
                   18.00         83.99    0.0350 /0.0450  Main Channel
                   20.00         84.27        0.0450
                   22.00         84.55        0.0450
                   24.00         84.88        0.0450
                   26.00         85.37        0.0450
                   27.00         85.68        0.0450
                   28.00         85.91        0.0450
                   29.00         86.08        0.0450
                   30.00         86.21        0.0450
                   31.00         86.29        0.0450
                   34.00         86.87        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.16    84.01    .165E+03       0.3         0.48      10.34
        0.32    84.17    .460E+03       1.2         0.77       6.41
        0.48    84.33    .855E+03       2.8         0.98       5.07
        0.64    84.48    .135E+04       5.2         1.14       4.35
        0.80    84.64    .193E+04       8.3         1.28       3.88
        0.95    84.80    .261E+04      12.3         1.40       3.53
        1.11    84.96    .337E+04      17.4         1.53       3.23
        1.27    85.12    .419E+04      23.5         1.66       2.97
        1.43    85.28    .506E+04      30.5         1.79       2.77
        1.59    85.44    .599E+04      38.5         1.90       2.60
        1.75    85.60    .697E+04      47.3         2.01       2.46
        1.91    85.76    .801E+04      57.1         2.12       2.34
        2.07    85.92    .911E+04      67.8         2.21       2.24
        2.23    86.07    .103E+05      79.5         2.30       2.15
        2.39    86.23    .115E+05      91.9         2.37       2.09
        2.54    86.39    .128E+05     105.7         2.45       2.02
        2.70    86.55    .142E+05     121.2         2.53       1.95
        2.86    86.71    .156E+05     138.0         2.62       1.89
        3.02    86.87    .171E+05     153.0         2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1166.52    26.52    6.75  29.37       1.34      1.71
   OUTFLOW: ID= 1 ( 60480) 1166.52    26.53    6.83  29.37       1.34      1.71


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60          4.16
     Dep. Storage     (mm)=       2.00          6.22
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     334.28         53.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=      63.34         56.03
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       6.23 (ii)    18.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.19          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.68          0.34        1.911 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17        6.00
     RUNOFF VOLUME    (mm)=      46.07         22.46       36.72
     TOTAL RAINFALL   (mm)=      48.07         48.07       48.07
     RUNOFF COEFFICIENT   =       0.96          0.47        0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
```

```
         ID1= 1 ( 40490):    16.76   1.911     6.00    36.72
       + ID2= 2 ( 60480):  1166.52  26.535     6.83    29.37
         ================================================
         ID = 3 ( 50490):  1183.28  26.765     6.83    29.48

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         85.84        0.0450
                    6.00         84.32        0.0450
                   12.00         84.21        0.0450
                   18.00         84.12        0.0450
                   24.00         84.08        0.0450
                   30.00         84.10        0.0450
                   36.00         84.03        0.0450
                   42.00         83.92        0.0450
                   48.00         83.88        0.0450
                   54.00         82.88        0.0350      Main Channel
                   60.00         83.12    0.0350 /0.0450  Main Channel
                   64.00         83.65        0.0450
                   68.00         83.60        0.0450
                   72.00         83.67        0.0450
                   76.00         83.70        0.0450
                   80.00         83.82        0.0450
                   84.00         83.90        0.0450
                   88.00         84.05        0.0450
                   92.00         84.16        0.0450
                  100.00         85.83        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.16    83.04    .332E+03       0.1         0.32      46.08
        0.31    83.19    .129E+04       0.8         0.57      26.14
        0.47    83.35    .259E+04       2.3         0.79      18.75
        0.62    83.50    .418E+04       4.5         0.96      15.43
        0.78    83.66    .626E+04       7.3         1.04      14.28
        0.93    83.81    .101E+05      11.9         1.05      14.10
        1.09    83.97    .153E+05      17.6         1.02      14.55
        1.24    84.13    .231E+05      26.2         1.00      14.73
        1.40    84.28    .341E+05      41.2         1.07      13.79
        1.55    84.44    .460E+05      61.7         1.19      12.44
        1.71    84.59    .582E+05      86.6         1.32      11.21
        1.86    84.75    .706E+05     115.2         1.45      10.21
        2.02    84.90    .831E+05     147.5         1.57       9.39
        2.17    85.06    .959E+05     183.2         1.70       8.72
        2.33    85.21    .109E+06     222.2         1.81       8.16
        2.48    85.37    .122E+06     264.5         1.93       7.68
        2.64    85.52    .135E+06     310.0         2.03       7.27
        2.79    85.68    .149E+06     358.5         2.14       6.91
        2.95    85.83    .162E+06     410.1         2.24       6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1183.28    26.76    6.83  29.48      1.25      1.01
   OUTFLOW: ID= 1 ( 60490) 1183.28    25.20    7.00  29.48      1.22      1.01


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92         4.72
     Dep. Storage     (mm)=       2.00         5.43
     Average Slope     (%)=       2.10         2.10
     Length            (m)=     370.92        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=      63.34        66.27
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       5.87 (ii)   14.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.19         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.11         0.51          2.548 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      46.07        23.61         37.36
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.49          0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40810):    20.64   2.548     6.00    37.36
       + ID2= 2 ( 60490):  1183.28  25.199     7.00    29.48
         ================================================
         ID = 3 ( 50810):  1203.92  25.420     7.00    29.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      63.34        25.38
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.08 (ii)   18.38 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.24          0.435 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25          6.00
     RUNOFF VOLUME    (mm)=      46.07        14.45         19.98
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.30          0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40500):     9.32   0.435     6.00    19.98
       + ID2= 2 ( 50810):  1203.92  25.420     7.00    29.61
         ================================================
         ID = 3 ( 50500):  1213.24  25.509     7.00    29.54

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.177 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.485
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.032 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.394
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.445

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.055 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      63.34        36.19
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.61 (ii)    2.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.29         0.29
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.00          0.079 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      46.07        21.49         45.82
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.45          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25        13.25
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     420.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      63.34        60.59
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       5.89 (ii)    8.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.19         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.33         1.73          3.059 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      46.07        26.19         32.15
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.54          0.67

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    1.8600      0.9862
                           0.0560      0.3250   |    2.1000      1.0580
                           0.2600      0.4718   |    2.2000      1.2000
                           0.7400      0.6512   |   10.0000      1.2500
                           1.4100      0.8427   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.500      3.059      6.00      32.15
   OUTFLOW: ID= 1 (******)     26.500      0.409      6.67      32.10
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.38
                  TIME SHIFT OF PEAK FLOW          (min)= 40.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5284

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  --------------------------
  | Junction Command(30651004) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
```

```
12241>   INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
12242>   OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00
12243>
12244>   ------------------------------------------------------------------------------
12245>
12246> --------------------
12247> | ADD HYD  (******)|
12248> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12249> --------------------         (ha)     (cms)    (hrs)     (mm)
12250> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
12251> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
12252>         ID1= 1 (******):    26.50   0.409     6.67    32.10
12253>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
12254>         ========================================================
12255>         ID = 3 (******):    26.50   0.409     6.67    32.10
12256>
12257>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12258> ------------------------------------------------------------------------------
12259> --------------------
12260> | CALIB            |
12261> | STANDHYD (******)|   Area    (ha)=   3.93
12262> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
12263> --------------------
12264>                            IMPERVIOUS    PERVIOUS (i)
12265>      Surface Area     (ha)=       3.89         0.04
12266>      Dep. Storage     (mm)=       2.00         4.48
12267>      Average Slope     (%)=       0.40         1.00
12268>      Length            (m)=     115.50         0.00
12269>      Mannings n            =      0.013        0.030
12270>
12271>      Max.Eff.Inten.(mm/hr)=      63.34        36.19
12272>                  over (min)       5.00         5.00
12273>      Storage Coeff.  (min)=       4.40 (ii)    4.40 (ii)
12274>      Unit Hyd. Tpeak (min)=       5.00         5.00
12275>      Unit Hyd. peak  (cms)=       0.23         0.23
12276>                                                          *TOTALS*
12277>      PEAK FLOW       (cms)=       0.67         0.00          0.674 (iii)
12278>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
12279>      RUNOFF VOLUME    (mm)=      46.07        21.49         45.82
12280>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
12281>      RUNOFF COEFFICIENT   =       0.96         0.45          0.95
12282>
12283> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
12284>
12285>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
12286>            CN*  =  85.0    Ia = Dep. Storage  (Above)
12287>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
12288>           THAN THE STORAGE COEFFICIENT.
12289>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12290>
12291> ------------------------------------------------------------------------------
12292>
12293> --------------------
12294> | ADD HYD  (******)|
12295> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12296> --------------------         (ha)     (cms)    (hrs)     (mm)
12297>         ID1= 1 (******):     0.93   0.055     6.08    21.47
12298>       + ID2= 2 (******):     3.93   0.674     6.00    45.82
12299>         ========================================================
12300>         ID = 3 (******):     4.86   0.722     6.00    41.16
12301>
12302>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12303> ------------------------------------------------------------------------------
12304>
12305> --------------------
12306> | ADD HYD  (******)|
12307> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
12308> --------------------         (ha)     (cms)    (hrs)     (mm)
12309>         ID1= 3 (******):     4.86   0.722     6.00    41.16
12310>       + ID2= 2 (******):     0.45   0.079     6.00    45.82
12311>         ========================================================
12312>         ID = 1 (******):     5.31   0.800     6.00    41.56
12313>
12314>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12315> ------------------------------------------------------------------------------
12316>
12317> --------------------
12318> | ADD HYD  (******)|
12319> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12320> --------------------         (ha)     (cms)    (hrs)     (mm)
12321>         ID1= 1 (******):     5.31   0.800     6.00    41.56
12322>       + ID2= 2 (******):    26.50   0.409     6.67    32.10
12323>         ========================================================
12324>         ID = 3 (******):    31.81   0.871     6.00    33.68
12325>
12326>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12327> ------------------------------------------------------------------------------
12328> --------------------
12329> | CALIB            |
12330> | NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
12331> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
12332> --------------------   U.H. Tp(hrs)=   0.45
12333>
12334>      Unit Hyd Qpeak  (cms)=   1.241
12335>
12336>      PEAK FLOW       (cms)=   0.536 (i)
12337>      TIME TO PEAK    (hrs)=   6.333
12338>      RUNOFF VOLUME    (mm)=  21.490
12339>      TOTAL RAINFALL   (mm)=  48.071
12340>      RUNOFF COEFFICIENT   =   0.447
12341>
12342>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12343>
12344> ------------------------------------------------------------------------------
12345>
12346> --------------------
12347> | ADD HYD  (******)|
12348> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12349> --------------------         (ha)     (cms)    (hrs)     (mm)
12350>         ID1= 1 (******):    14.62   0.536     6.33    21.49
12351>       + ID2= 2 (******):    31.81   0.871     6.00    33.68
12352>         ========================================================
12353>         ID = 3 (******):    46.43   1.171     6.00    29.84
12354>
12355>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12356> ------------------------------------------------------------------------------
12357> --------------------
12358> | ROUTE CHN(******)|
12359> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
12360> --------------------
12361>                <------ DATA FOR SECTION (   1.1) ------>
12362>                Distance      Elevation       Manning
12363>                    0.00         443.75        0.0450
12364>                    8.50         443.74        0.0450
12365>                   35.47         443.64        0.0450
12366>                   64.60         443.29        0.0450
12367>                   74.71         443.18        0.0450
12368>                   80.25         443.17        0.0450
12369>                  112.17         443.12    0.0450 /0.0350  Main Channel
12370>                  131.57         442.76        0.0350      Main Channel
12371>                  137.50         442.66        0.0350      Main Channel
12372>                  137.91         442.67        0.0350      Main Channel
12373>                  152.28         442.24        0.0350      Main Channel
12374>                  167.40         441.39        0.0350      Main Channel
12375>                  178.29         441.56        0.0350      Main Channel
12376>                  216.75         442.01        0.0350      Main Channel
12377>                  221.54         442.05    0.0350 /0.0450  Main Channel
12378>                  334.66         442.50        0.0450
12379>
12380>       <--------------------- TRAVEL TIME TABLE ---------------------->
12381>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
12382>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
12383>         0.05   441.45    .114E+03       0.0          0.27       55.89
12384>         0.11   441.50    .457E+03       0.2          0.43       35.21
12385>         0.16   441.56    .103E+04       0.6          0.57       26.87
12386>         0.22   441.61    .185E+04       1.4          0.67       22.84
12387>         0.27   441.67    .297E+04       2.5          0.77       19.84
12388>         0.33   441.72    .437E+04       4.1          0.87       17.59
12389>         0.38   441.78    .605E+04       6.4          0.96       15.85
12390>         0.44   441.83    .802E+04       9.2          1.05       14.47
12391>         0.49   441.89    .103E+05      12.8          1.14       13.35
12392>         0.55   441.94    .128E+05      17.2          1.23       12.42
12393>         0.60   442.00    .157E+05      22.4          1.31       11.63
12394>         0.66   442.05    .188E+05      28.3          1.38       11.07
12395>         0.71   442.11    .225E+05      36.9          1.50       10.16
12396>         0.78   442.17    .277E+05      48.4          1.60        9.54
12397>         0.84   442.24    .339E+05      61.9          1.67        9.13
12398>         0.91   442.30    .412E+05      77.1          1.71        8.90
12399>         0.97   442.36    .495E+05      94.7          1.75        8.71
12400>         1.03   442.43    .589E+05     114.9          1.79        8.54
12401>         1.10   442.49    .693E+05     137.9          1.82        8.38
12402>
12403>                                      <---- hydrograph ---->   <-pipe / channel->
12404>                                 AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
12405>                                 (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
12406>    INFLOW : ID= 2 (******)    46.43     1.17     6.00  29.84      0.21      0.64
12407>    OUTFLOW: ID= 1 (******)    46.43     0.91     6.58  29.84      0.19      0.60
12408>
12409>
12410>
12411> ------------------------------------------------------------------------------
12412> --------------------
12413> | DIVERTHYD(******)|
12414> | IN= 1   # OUT= 5 |
12415> --------------------
12416>      Outflow / Inflow  Relationships
12417>
12418>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
12419>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
12420>        0.00     0.00     0.00     0.00     0.00     0.00
12421>        0.92     0.00     0.00     0.00     0.00     0.92
12422>        1.00     0.73     0.00     0.00     0.00     1.73
12423>        1.00     1.11     0.00     0.00     0.00     2.11
12424>        1.00     1.60     0.00     0.00     0.00     2.60
12425>        1.00     2.08     0.00     0.00     0.00     3.08
12426>        1.00     2.63     0.00     0.00     0.00     3.63
12427>        1.00     4.53     0.00     0.00     0.00     5.53
12428>
12429>                              AREA     QPEAK     TPEAK     R.V.
12430>                              (ha)     (cms)     (hrs)     (mm)
12431>      TOTAL HYD.(ID= 1):    46.43      0.91      6.58    29.84
12432>      ================================================================
12433>      ID= 2  (   2)    :    46.43      0.91      6.58    29.84
12434>      ID= 3  (   2)    :     0.00      0.00      0.00     0.00
12435>      ID= 4  (   2)    :     0.00      0.00      0.00     0.00
12436>      ID= 5  (   2)    :     0.00      0.00      0.00     0.00
12437>      ID= 6  (   2)    :     0.00      0.00      0.00     0.00
12438> ------------------------------------------------------------------------------
12439> --------------------
12440> | CALIB            |
12441> | NASHYD   (******)|   Area    (ha)=   0.22   Curve Number   (CN)= 85.0
12442> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
12443> --------------------   U.H. Tp(hrs)=   0.16
12444>
12445>      Unit Hyd Qpeak  (cms)=   0.053
12446>
12447>      PEAK FLOW       (cms)=   0.016 (i)
12448>      TIME TO PEAK    (hrs)=   6.000
12449>      RUNOFF VOLUME    (mm)=  21.393
12450>      TOTAL RAINFALL   (mm)=  48.071
12451>      RUNOFF COEFFICIENT   =   0.445
12452>
12453>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12454>
12455> ------------------------------------------------------------------------------
12456>
12457> --------------------
12458> | ADD HYD  (******)|
12459> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12460> --------------------         (ha)     (cms)    (hrs)     (mm)
12461> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
12462> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
12463>         ID1= 1 (******):     0.22   0.016     6.00    21.39
12464>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
12465>         ========================================================
12466>         ID = 3 (******):     0.22   0.016     6.00    21.39
12467>
12468>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12469> ------------------------------------------------------------------------------
12470> --------------------
12471> | ROUTE CHN(******)|
12472> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
12473> --------------------
12474>                <------ DATA FOR SECTION (   1.1) ------>
12475>                Distance      Elevation       Manning
12476>                    0.00         433.07        0.0450
12477>                   59.66         432.39        0.0450
12478>                   94.25         432.03        0.0450
12479>                  115.71         431.82        0.0450
12480>                  143.84         431.84    0.0450 /0.0350  Main Channel
12481>                  163.59         431.75        0.0350      Main Channel
12482>                  177.84         431.73        0.0350      Main Channel
12483>                  199.51         431.70        0.0350      Main Channel
12484>                  231.74         431.53        0.0350      Main Channel
12485>                  283.71         431.44        0.0350      Main Channel
12486>                  294.09         431.43        0.0350      Main Channel
12487>                  325.65         431.42        0.0350      Main Channel
12488>                  355.24         431.24        0.0350      Main Channel
12489>                  383.70         431.43        0.0350      Main Channel
12490>                  476.17         432.06    0.0350 /0.0450  Main Channel
12491>                  510.88         432.23        0.0450
12492>                  558.61         432.37        0.0450
12493>                  589.84         432.57        0.0450
12494>                  622.97         432.73        0.0450
12495>
12496>       <---------------------- TRAVEL TIME TABLE ---------------------->
12497>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
12498>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
12499>         0.08   431.32    .108E+03       0.3          0.30       6.68
12500>         0.15   431.39    .434E+03       1.7          0.47       4.21
12501>         0.23   431.47    .119E+04       5.0          0.50       3.99
12502>         0.30   431.54    .252E+04      13.9          0.66       3.02
12503>         0.38   431.62    .417E+04      29.3          0.84       2.37
12504>         0.45   431.69    .604E+04      50.1          0.99       2.01
12505>         0.53   431.77    .828E+04      73.9          1.06       1.87
12506>         0.60   431.84    .109E+05     108.8          1.19       1.67
12507>         0.68   431.92    .142E+05     159.5          1.34       1.48
12508>         0.76   432.01    .176E+05     219.4          1.48       1.34
12509>         0.84   432.09    .213E+05     290.0          1.62       1.22
12510>         0.92   432.17    .252E+05     374.6          1.77       1.12
12511>         1.01   432.25    .293E+05     469.2          1.91       1.04
12512>         1.09   432.33    .338E+05     573.9          2.02       0.98
12513>         1.17   432.41    .386E+05     689.9          2.13       0.93
12514>         1.25   432.49    .435E+05     817.2          2.24       0.89
12515>         1.33   432.57    .487E+05     955.3          2.34       0.85
12516>         1.41   432.65    .541E+05    1103.5          2.43       0.82
12517>         1.49   432.73    .597E+05    1262.7          2.52       0.79
12518>
12519>                                      <---- hydrograph ---->   <-pipe / channel->
12520>                                 AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
12521>                                 (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
12522>    INFLOW : ID= 2 (******)     0.22     0.02     6.00  21.39      0.00      0.30
12523>    OUTFLOW: ID= 1 (******)     0.22     0.01     6.17  21.38      0.00      0.30
12524>
12525>
12526>
12527> ------------------------------------------------------------------------------
12528>
12529> --------------------
12530> | ADD HYD  (******)|
12531> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12532> --------------------         (ha)     (cms)    (hrs)     (mm)
12533>         ID1= 1 (******):     3.87   0.177     6.17    21.49
12534>       + ID2= 2 (******):     0.45   0.032     6.00    21.39
12535>         ========================================================
12536>         ID = 3 (******):     4.32   0.200     6.17    21.48
12537>
12538>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12539> ------------------------------------------------------------------------------
12540>
12541> --------------------
12542> | ADD HYD  (******)|
12543> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
12544> --------------------         (ha)     (cms)    (hrs)     (mm)
12545>         ID1= 3 (******):     4.32   0.200     6.17    21.48
12546>       + ID2= 2 (******):     0.22   0.013     6.17    21.38
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         ==================================================
         ID = 1 (******):     4.54   0.213     6.17    21.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         430.79        0.0450
                  23.82         429.79    0.0450 /0.0350  Main Channel
                  44.05         429.11        0.0350      Main Channel
                  70.46         428.15        0.0350      Main Channel
                 112.31         427.60        0.0350      Main Channel
                 150.77         427.27        0.0350      Main Channel
                 179.17         427.15        0.0350      Main Channel
                 214.90         427.16        0.0350      Main Channel
                 261.89         427.25        0.0350      Main Channel
                 317.65         427.56        0.0350      Main Channel
                 382.75         427.99        0.0350      Main Channel
                 394.40         428.11        0.0350      Main Channel
                 432.80         428.07        0.0350      Main Channel
                 432.91         428.07        0.0350      Main Channel
                 462.57         428.15        0.0350      Main Channel
                 522.90         429.79    0.0350 /0.0450  Main Channel
                 585.04         429.90        0.0450
                 731.92         430.62        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.18   427.33    .207E+04       11.5         0.73       2.99
         0.35   427.50    .570E+04       49.9         1.15       1.91
         0.53   427.68    .105E+05      119.2         1.49       1.47
         0.70   427.85    .163E+05      221.8         1.79       1.22
         0.88   428.03    .229E+05      360.8         2.06       1.06
         1.06   428.21    .312E+05      509.7         2.14       1.02
         1.23   428.38    .405E+05      771.0         2.49       0.88
         1.41   428.56    .500E+05     1076.3         2.82       0.77
         1.58   428.73    .598E+05     1423.8         3.12       0.70
         1.76   428.91    .699E+05     1812.5         3.40       0.64
         1.94   429.09    .802E+05     2241.5         3.66       0.60
         2.11   429.26    .907E+05     2709.1         3.91       0.56
         2.29   429.44    .102E+06     3215.8         4.15       0.53
         2.46   429.61    .113E+06     3761.6         4.38       0.50
         2.64   429.79    .124E+06     4346.4         4.59       0.48
         2.85   430.00    .136E+06     5173.9         4.88       0.45
         3.06   430.20    .156E+06     6075.9         5.12       0.43
         3.26   430.41    .173E+06     7054.9         5.33       0.41
         3.47   430.62    .193E+06     8114.3         5.52       0.40

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     4.54     0.21    6.17  21.47      0.00      0.73
   OUTFLOW: ID= 1 (******)     4.54     0.21    6.25  21.47      0.00      0.73



--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.057 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.046 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.429
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.046     6.08    21.43
      + ID2= 2 (******):     0.97   0.057     6.08    21.47
        ==================================================
        ID = 3 (******):     1.66   0.103     6.08    21.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.103     6.08    21.45
      + ID2= 2 (******):     4.54   0.208     6.25    21.47
        ==================================================
        ID = 3 (******):     6.20   0.299     6.17    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):      6.20      0.30      6.17   21.47
     ==================================================
     ID= 2  (   2)    :     6.20      0.30      6.17   21.47
     ID= 3  (   2)    :     0.00      0.00      6.17   21.47
     ID= 4  (   2)    :     0.00      0.00      0.00    0.00
     ID= 5  (   2)    :     0.00      0.00      0.00    0.00
     ID= 6  (   2)    :     0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.96         0.25
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.64         0.54
     Length            (m)=      63.89       157.20
     Mannings n           =      0.013        0.030


     Max.Eff.Inten.(mm/hr)=      63.34        36.19
                 over (min)       5.00        10.00
     Storage Coeff.  (min)=       2.68 (ii)    7.38 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.02          0.188 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      46.07        21.49         40.91
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.45          0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.32         0.58
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.70         0.60
     Length            (m)=     166.18       124.91
     Mannings n           =      0.013        0.030


     Max.Eff.Inten.(mm/hr)=      63.34        36.19
                 over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.63 (ii)    8.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.22         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.40         0.04          0.441 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      46.07        21.49         41.15
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.45          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.90   0.441     6.00    41.15
      + ID2= 2 (******):     1.21   0.188     6.00    40.91
        ==================================================
        ID = 3 (******):     4.11   0.629     6.00    41.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.85     0.00     0.00     0.00     0.00     0.85
        0.85     1.00     0.00     0.00     0.00     1.85
        0.85   100.00     0.00     0.00     0.00   100.85

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):      4.11      0.63      6.00   41.08
     ==================================================
     ID= 2  (   2)    :     4.11      0.63      6.00   41.08
     ID= 3  (   2)    :     0.00      0.00      6.00   41.08
     ID= 4  (   2)    :     0.00      0.00      0.00    0.00
     ID= 5  (   2)    :     0.00      0.00      0.00    0.00
     ID= 6  (   2)    :     0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000     6.17    21.47
      + ID2= 2 (******):     4.11   0.629     6.00    41.08
        ==================================================
        ID = 3 (******):     4.11   0.629     6.00    41.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     5.20     0.00     0.00     0.00     5.20
        1.00     5.20     0.00     0.00     0.00     6.20
      100.00     5.20     0.00     0.00     0.00   105.20

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):      4.11      0.63      6.00   41.08
     ==================================================
     ID= 2  (   2)    :     0.00      0.00      6.00   41.08
     ID= 3  (   2)    :     4.11      0.63      6.00   41.08
     ID= 4  (   2)    :     0.00      0.00      0.00    0.00
     ID= 5  (   2)    :     0.00      0.00      0.00    0.00
     ID= 6  (   2)    :     0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.20   0.299     6.17    21.47
      + ID2= 2 (******):     0.00   0.000     6.00    41.08
        ==================================================
        ID = 3 (******):     6.20   0.299     6.17    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):      6.20      0.30      6.17   21.47
     ==================================================
```

```
      ID= 2  (   2)    :   6.20      0.30      6.17   21.47
      ID= 3  (   2)    :   0.00      0.00      6.17   21.47
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.01     0.00     0.00     0.00     0.00     0.01
        0.06     0.00     0.00     0.00     0.00     0.06
        0.08     0.00     0.00     0.00     0.00     0.08
        0.12     0.00     0.00     0.00     0.00     0.12
        0.20     0.00     0.00     0.00     0.00     0.20
        0.25     0.00     0.00     0.00     0.00     0.25
        0.30     0.00     0.00     0.00     0.00     0.30
        0.33     0.00     0.00     0.00     0.00     0.33
        0.37     0.00     0.00     0.00     0.00     0.37
        0.39     0.00     0.00     0.00     0.00     0.39
        0.42     1.43     0.00     0.00     0.00     1.85
        0.44     8.83     0.00     0.00     0.00     9.27
        0.47    25.03     0.00     0.00     0.00    25.50
        0.49    52.11     0.00     0.00     0.00    52.61
        0.52    91.81     0.00     0.00     0.00    92.33
        0.53   126.04     0.00     0.00     0.00   126.57

                            AREA     QPEAK     TPEAK     R.V.
                            (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):    6.20      0.30      6.17   21.47
     ==================================================
      ID= 2  (   2)    :   6.20      0.30      6.17   21.47
      ID= 3  (   2)    :   0.00      0.00      6.17   21.47
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.81         0.01
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.50         1.00
     Length            (m)=      18.40         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      63.34        36.19
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.37 (ii)    1.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.33
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.00          0.144 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      46.07        21.49          45.82
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.45           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.82   0.144     6.00    45.82
     + ID2= 2 (******):     0.00   0.000     6.17    21.47
       ==================================================
       ID = 3 (******):     0.82   0.144     6.00    45.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     0.82   0.144     6.00    45.82
     + ID2= 2 (******):     0.00   0.000     6.17    21.47
       ==================================================
       ID = 1 (******):     0.82   0.144     6.00    45.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.03     0.00     0.00     0.00     0.00     0.03
        0.04     0.00     0.00     0.00     0.00     0.04
        0.09     0.00     0.00     0.00     0.00     0.09
        0.12     0.00     0.00     0.00     0.00     0.13
        0.20     0.00     0.00     0.00     0.00     0.20
        0.30     0.00     0.00     0.00     0.00     0.30
        0.37     0.00     0.00     0.00     0.00     0.37
        0.43     0.00     0.00     0.00     0.00     0.43
        0.48     0.00     0.00     0.00     0.00     0.48
        0.52     0.00     0.00     0.00     0.00     0.52
        0.57     0.00     0.00     0.00     0.00     0.57
        0.67     0.00     0.00     0.00     0.00     0.67
        0.68     0.00     0.00     0.00     0.00     0.68
        0.68     0.02     0.00     0.00     0.00     0.70
        0.72     0.56     0.00     0.00     0.00     1.28
        0.73     0.75     0.01     0.00     0.00     1.48
        1.10     1.87     0.54     0.00     0.00     3.51
        1.40     2.25     2.61     0.00     0.00     6.26

                            AREA     QPEAK     TPEAK     R.V.
                            (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):    0.82      0.14      6.00    45.70
     ==================================================
     ID= 2  (   3)    :   0.82      0.14      6.00    45.70
     ID= 3  (   3)    :   0.00      0.00      6.00    45.70
     ID= 4  (   3)    :   0.00      0.00      6.00    45.70
     ID= 5  (   3)    :   0.00      0.00      0.00     0.00
     ID= 6  (   3)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     6.20   0.299     6.17    21.47
     + ID2= 2 (******):     0.82   0.144     6.00    45.70
       ==================================================
       ID = 3 (******):     7.02   0.375     6.00    24.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
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| NASHYD   (******)|   Area    (ha)=  11.36   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   1.315

     PEAK FLOW       (cms)=   0.519 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.486
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.75   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.045 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.463
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area    (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      54.14        24.23
     Dep. Storage     (mm)=       2.00         5.78
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     722.82        47.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=      63.34        46.61
                   over (min)      10.00        25.00
     Storage Coeff.  (min)=      10.37 (ii)   22.96 (ii)
     Unit Hyd. Tpeak (min)=      10.00        25.00
     Unit Hyd. peak  (cms)=       0.11         0.05
                                                    *TOTALS*
     PEAK FLOW       (cms)=       6.02         1.43          6.841 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=      46.07        21.11          35.15
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.44           0.73

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         144.07        0.0450
                  9.00         143.84        0.0450
                 12.00         142.90        0.0450
                 15.00         142.48        0.0450
                 18.00         142.43    0.0450 /0.0350  Main Channel
                 21.00         142.31        0.0350      Main Channel
                 24.00         142.12        0.0350      Main Channel
                 27.00         142.44    0.0350 /0.0450  Main Channel
                 30.00         142.71        0.0450
                 33.00         143.18        0.0450
                 36.00         143.27        0.0450
                 37.00         143.36        0.0450
                 38.00         143.64        0.0450
                 39.00         143.92        0.0450
                 40.00         143.93        0.0450
                 45.00         144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.08   142.20    .282E+02       0.0         0.24       26.26
       0.16   142.27    .113E+03       0.1         0.38       16.54
       0.23   142.35    .257E+03       0.3         0.48       13.09
       0.31   142.43    .477E+03       0.7         0.57       11.02
       0.42   142.54    .969E+03       2.0         0.76        8.24
       0.53   142.65    .157E+04       3.8         0.92        6.80
       0.64   142.76    .224E+04       6.3         1.06        5.90
       0.75   142.87    .299E+04       9.5         1.19        5.26
       0.86   142.98    .379E+04      13.2         1.31        4.77
       0.97   143.09    .463E+04      17.6         1.43        4.37
       1.08   143.20    .552E+04      22.5         1.53        4.09
       1.19   143.31    .653E+04      27.9         1.60        3.90
       1.30   143.42    .761E+04      34.4         1.70        3.69
       1.41   143.53    .874E+04      41.7         1.79        3.49
       1.52   143.64    .989E+04      49.7         1.89        3.32
       1.63   143.75    .111E+05      58.3         1.98        3.17
       1.74   143.85    .123E+05      66.9         2.04        3.06
       1.85   143.96    .137E+05      73.2         2.01        3.11
       1.96   144.07    .153E+05      81.5         2.00        3.13

                                   <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
    INFLOW : ID= 2 ( 40600)   78.37     6.84    6.00  35.15       0.66       1.08
    OUTFLOW: ID= 1 ( 60600)   78.37     6.42    6.08  35.15       0.64       1.06


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--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area    (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75         2.18
     Dep. Storage     (mm)=       2.00         8.00
     Average Slope     (%)=       2.90         2.90
     Length            (m)=     162.03        40.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=      63.34        32.10
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       3.24 (ii)   15.20 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.27         0.07
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.22         0.11          0.291 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      46.07        16.69          25.98
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.35           0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40610):     3.94   0.291     6.00    25.98
      + ID2= 2 ( 60600):    78.37   6.424     6.08    35.15
        ==================================================
        ID = 3 ( 50600):    82.31   6.592     6.08    34.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         143.40        0.0450
                   2.00         142.92        0.0450
                   4.00         142.14        0.0450
                   6.00         141.49        0.0450
                   8.00         141.11        0.0450
                  10.00         141.00    0.0450 /0.0350  Main Channel
                  12.00         140.98        0.0350      Main Channel
                  14.00         140.82        0.0350      Main Channel
                  16.00         141.02    0.0350 /0.0450  Main Channel
                  18.00         141.19        0.0450
                  20.00         141.19        0.0450
                  22.00         141.44        0.0450
                  24.00         142.00        0.0450
                  26.00         142.20        0.0450
                  28.00         142.39        0.0450
                  30.00         142.96        0.0450
                  31.00         143.13        0.0450
                  32.00         143.28        0.0450
                  33.00         143.41        0.0450
                  34.00         143.44        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  140.91    .314E+02       0.0         0.24       23.12
        0.18  141.00    .132E+03       0.1         0.31       17.83
        0.33  141.14    .502E+03       0.9         0.58        9.54
        0.47  141.29    .107E+04       2.4         0.74        7.47
        0.61  141.43    .175E+04       4.7         0.89        6.20
        0.75  141.57    .251E+04       7.9         1.05        5.31
        0.89  141.71    .332E+04      11.8         1.19        4.68
        1.03  141.85    .416E+04      16.5         1.32        4.21
        1.17  141.99    .506E+04      21.8         1.44        3.86
        1.31  142.13    .601E+04      27.5         1.52        3.64
        1.45  142.27    .705E+04      34.0         1.61        3.46
        1.59  142.41    .818E+04      41.5         1.69        3.29
        1.73  142.55    .936E+04      50.2         1.79        3.11
        1.88  142.69    .106E+05      59.8         1.88        2.95
        2.02  142.84    .118E+05      70.2         1.97        2.81
        2.16  142.98    .132E+05      81.2         2.06        2.70
        2.30  143.12    .145E+05      92.6         2.12        2.61
        2.44  143.26    .159E+05     104.8         2.19        2.54
        2.58  143.40    .174E+05     117.7         2.24        2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50600)   82.31     6.59    6.08  34.71      0.69      0.98
   OUTFLOW: ID= 1 ( 60610)   82.31     6.17    6.17  34.71      0.67      0.96


--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40620)|   Area    (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30         1.37
     Dep. Storage     (mm)=       2.00         5.59
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     194.41        43.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        58.75
                  over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.41 (ii)   14.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.23         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.59         0.14       0.709 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=      46.07        23.13       37.04
     TOTAL RAINFALL   (mm)=      48.07        48.07       48.07
     RUNOFF COEFFICIENT   =       0.96         0.48        0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40620):     5.67   0.709     6.00    37.04
      + ID2= 2 ( 60610):    82.31   6.172     6.17    34.71
        ==================================================
        ID = 3 ( 50610):    87.98   6.440     6.17    34.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         142.03        0.0450
                   1.00         141.71        0.0450
                   2.00         141.35        0.0450
                   3.00         141.01        0.0450
                   4.00         140.79        0.0450
                   5.00         140.56        0.0450
                   6.00         140.44        0.0450
                   7.00         140.30    0.0450 /0.0350  Main Channel
                   8.00         140.08        0.0350      Main Channel
                   9.00         139.88        0.0350      Main Channel
                  10.00         139.97        0.0350      Main Channel
                  11.00         140.12        0.0350      Main Channel
                  12.00         140.35    0.0350 /0.0450  Main Channel
                  13.00         140.52        0.0450
                  14.00         140.73        0.0450
                  15.00         140.97        0.0450
                  16.00         141.27        0.0450
                  17.00         141.57        0.0450
                  18.00         141.89        0.0450
                  19.00         142.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  139.99    .161E+02       0.0         0.36        8.21
        0.21  140.09    .579E+02       0.2         0.59        5.04
        0.31  140.19    .120E+03       0.5         0.78        3.79
        0.42  140.30    .200E+03       1.1         0.95        3.12
        0.53  140.41    .313E+03       2.1         1.18        2.51
        0.65  140.53    .456E+03       3.5         1.36        2.18
        0.76  140.65    .630E+03       5.3         1.50        1.98
        0.88  140.76    .826E+03       7.6         1.63        1.82
        0.99  140.88    .104E+04      10.3         1.75        1.69
        1.11  140.99    .128E+04      13.4         1.87        1.59
        1.23  141.11    .154E+04      17.1         1.98        1.50
        1.34  141.22    .180E+04      21.2         2.09        1.42
        1.46  141.34    .209E+04      25.8         2.20        1.35
        1.57  141.45    .239E+04      30.9         2.30        1.29
        1.69  141.57    .270E+04      36.4         2.40        1.24
        1.80  141.69    .303E+04      42.4         2.49        1.19
        1.92  141.80    .337E+04      48.9         2.58        1.15
        2.04  141.92    .373E+04      55.9         2.67        1.11
        2.15  142.03    .411E+04      63.2         2.74        1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98     6.44    6.17  34.86      0.82      1.56
   OUTFLOW: ID= 1 ( 60620)   87.98     6.38    6.17  34.86      0.82      1.56


--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      63.34        31.84
                  over (min)        5.00        20.00
     Storage Coeff.  (min)=       3.17 (ii)   18.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.27         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.06        0.155 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17        6.00
     RUNOFF VOLUME    (mm)=      46.07        17.11       26.26
     TOTAL RAINFALL   (mm)=      48.07        48.07       48.07
     RUNOFF COEFFICIENT   =       0.96         0.36        0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40640):     2.13   0.155     6.00    26.26
      + ID2= 2 ( 60620):    87.98   6.379     6.17    34.86
        ==================================================
        ID = 3 ( 50630):    90.11   6.456     6.17    34.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        41.61
                  over (min)        5.00        20.00
     Storage Coeff.  (min)=       6.62 (ii)   18.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.77         0.45        2.075 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17        6.00
     RUNOFF VOLUME    (mm)=      46.07        20.28       33.86
     TOTAL RAINFALL   (mm)=      48.07        48.07       48.07
     RUNOFF COEFFICIENT   =       0.96         0.42        0.70


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40630):    20.54   2.075     6.00    33.86
      + ID2= 2 ( 50630):    90.11   6.456     6.17    34.66
        ==================================================
        ID = 3 ( 50640):   110.65   7.496     6.17    34.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                            0.0000      0.0000  |    3.4010      4.4390
                            0.0530      0.4910  |    4.8380      5.5060
                            0.0890      0.7040  |    5.8470      5.5380
                            0.2040      1.0890  |    6.5980      5.9190
                            0.3240      1.4800  |    7.2560      6.2250
                            0.3890      1.7490  |    7.9030      6.4820
                            0.4470      1.9970  |    8.4910      6.6820
                            0.5090      2.3490  |   12.0680      7.1150
                            0.7420      2.9150  |   20.0000      7.2000
                            1.7580      3.6690  |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50640)    110.646     7.496      6.17      34.51
   OUTFLOW: ID= 1 (******)    110.646     0.659      8.42      34.48
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.79
                  TIME SHIFT OF PEAK FLOW          (min)=135.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  2.7136

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  --------------------------
  | Junction Command(30651003) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651003)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
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 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
 *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
 *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
         ID1= 1 (******):   110.65   0.659     8.42    34.48
       + ID2= 2 (******):     0.00   0.000     0.00     0.00
         ==================================================
         ID = 3 (******):   110.65   0.659     8.42    34.48

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):   110.65   0.659     8.42    34.48
       + ID2= 2 (******):     0.75   0.045     6.08    21.46
         ==================================================
         ID = 1 (******):   111.40   0.662     8.33    34.39

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    11.36   0.519     6.17    21.49
       + ID2= 2 (******):   111.40   0.662     8.33    34.39
         ==================================================
         ID = 3 (******):   122.76   0.895     6.33    33.20

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 ---------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        447.10        0.0450
                   42.83        446.80        0.0450
                   42.89        446.80        0.0450
                   43.24        446.79        0.0450
                  122.57        446.48        0.0450
                  154.02        446.22        0.0450
                  191.79        446.32    0.0450 /0.0350  Main Channel
                  199.05        442.27        0.0350      Main Channel
                  199.74        442.33        0.0350      Main Channel
                  212.02        444.19        0.0350      Main Channel
                  232.17        444.54    0.0350 /0.0450  Main Channel
                  348.58        444.42        0.0450
                  359.23        444.30        0.0450
                  381.33        444.03        0.0450
                  483.65        444.18        0.0450
                  548.64        445.87        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.19    442.46     .184E+03       0.1         0.65       24.29
        0.38    442.65     .662E+03       0.7         1.01       15.64
        0.57    442.84     .143E+04       2.0         1.31       12.09
        0.76    443.03     .247E+04       4.1         1.57       10.05
        0.95    443.22     .381E+04       7.3         1.81        8.70
        1.14    443.41     .543E+04      11.7         2.04        7.73
        1.33    443.60     .733E+04      17.5         2.26        6.99
        1.52    443.79     .952E+04      24.8         2.46        6.41
        1.71    443.98     .120E+05      33.7         2.66        5.93
        1.89    444.16     .211E+05      47.0         2.11        7.49
        2.08    444.35     .469E+05      73.0         1.47       10.71
        2.27    444.54     .855E+05     117.6         1.30       12.12
        2.46    444.73     .140E+06     240.0         1.62        9.75
        2.65    444.92     .197E+06     400.4         1.92        8.20
        2.84    445.11     .255E+06     595.0         2.21        7.13
        3.03    445.30     .314E+06     821.8         2.48        6.37
        3.22    445.49     .374E+06    1079.2         2.73        5.78
        3.41    445.68     .436E+06    1366.3         2.96        5.32
        3.60    445.87     .500E+06    1682.3         3.19        4.95

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)  122.76     0.90     6.33  33.20      0.41      1.04
   OUTFLOW: ID= 1 (******)  122.76     0.81     6.58  33.20      0.39      1.03


--------------------------------------------------------------------------------

 ---------------------
 | CALIB             |
 | NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.19

      Unit Hyd Qpeak  (cms)=   0.090

      PEAK FLOW       (cms)=   0.029 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  21.440
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.446

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.45   0.029     6.08    21.44
       + ID2= 2 (******):   122.76   0.814     6.58    33.20
         ==================================================
         ID = 3 (******):   123.21   0.822     6.58    33.15

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 ---------------------
 | CALIB             |
 | NASHYD   (******)|   Area     (ha)=   2.19   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.27

      Unit Hyd Qpeak  (cms)=   0.310

      PEAK FLOW       (cms)=   0.114 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  21.478
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.447

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 ---------------------
 | CALIB             |
 | NASHYD   (******)|   Area     (ha)=   0.39   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.083

      PEAK FLOW       (cms)=   0.026 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  21.429
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.446

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.39   0.026     6.08    21.43
       + ID2= 2 (******):     2.19   0.114     6.17    21.48
         ==================================================
         ID = 3 (******):     2.58   0.139     6.08    21.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     2.58   0.139     6.08    21.47
       + ID2= 2 (******):   123.21   0.822     6.58    33.15
         ==================================================
         ID = 1 (******):   125.79   0.889     6.50    32.91

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 ---------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        429.12        0.0450
                   37.54        428.86        0.0450
                   53.31        428.70        0.0450
                   81.17        428.24        0.0450
                   99.28        428.15    0.0450 /0.0350  Main Channel
                  114.53        427.72        0.0350      Main Channel
                  119.88        426.51        0.0350      Main Channel
                  124.17        425.84        0.0350      Main Channel
                  206.01        425.90        0.0350      Main Channel
                  209.64        426.51        0.0350      Main Channel
                  214.21        426.89        0.0350      Main Channel
                  231.49        427.17        0.0350      Main Channel
                  268.61        427.89    0.0350 /0.0450  Main Channel
                  351.58        428.15        0.0450
                  368.27        428.31        0.0450
                  405.75        428.52        0.0450
                  416.79        428.59        0.0450
                  440.06        428.76        0.0450
                  469.88        428.97        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.16    426.00     .218E+04       4.1         0.39        8.87
        0.31    426.16     .495E+04      15.8         0.67        5.22
        0.47    426.32     .779E+04      33.2         0.89        3.92
        0.63    426.47     .107E+05      55.4         1.08        3.22
        0.79    426.63     .137E+05      81.8         1.25        2.78
        0.94    426.79     .167E+05     112.4         1.40        2.48
        1.10    426.95     .199E+05     144.6         1.52        2.29
        1.26    427.10     .233E+05     176.4         1.58        2.20
        1.42    427.26     .271E+05     214.5         1.65        2.11
        1.57    427.42     .312E+05     258.4         1.73        2.01
        1.73    427.58     .356E+05     307.7         1.81        1.93
        1.89    427.73     .402E+05     362.0         1.88        1.85
        2.05    427.89     .452E+05     415.1         1.91        1.82
        2.23    428.07     .525E+05     501.3         1.99        1.74
        2.41    428.25     .621E+05     609.1         2.05        1.70
        2.59    428.43     .733E+05     739.1         2.10        1.65
        2.77    428.61     .862E+05     886.8         2.15        1.62
        2.95    428.79     .101E+06    1053.9         2.19        1.59
        3.13    428.97     .116E+06    1240.2         2.22        1.57

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)  125.79     0.89     6.50  32.91      0.03      0.39
   OUTFLOW: ID= 1 (******)  125.79     0.85     6.67  32.91      0.03      0.39


--------------------------------------------------------------------------------

 ---------------------
 | CALIB             |
 | NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.29

      Unit Hyd Qpeak  (cms)=   0.341

      PEAK FLOW       (cms)=   0.130 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  21.482
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.447

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

 ---------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0000
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.05    441.45     .216E+02       0.0         0.17       16.51
        0.11    441.50     .864E+02       0.1         0.28       10.40
        0.16    441.56     .194E+03       0.4         0.36        7.94
        0.22    441.61     .350E+03       0.9         0.43        6.75
        0.27    441.67     .561E+03       1.6         0.49        5.86
        0.33    441.72     .825E+03       2.6         0.55        5.20
        0.38    441.78     .114E+04       4.1         0.62        4.68
        0.44    441.83     .152E+04       5.9         0.67        4.27
        0.49    441.89     .194E+04       8.2         0.73        3.94
        0.55    441.94     .242E+04      11.0         0.79        3.67
        0.60    442.00     .296E+04      14.3         0.84        3.44
        0.66    442.05     .355E+04      18.1         0.88        3.27
        0.71    442.11     .425E+04      23.6         0.96        3.00
        0.78    442.17     .523E+04      31.0         1.02        2.82
        0.84    442.24     .641E+04      39.6         1.07        2.70
        0.91    442.30     .778E+04      49.3         1.10        2.63
        0.97    442.36     .935E+04      60.5         1.12        2.57
        1.03    442.43     .111E+05      73.5         1.14        2.52
        1.10    442.49     .131E+05      88.2         1.16        2.47

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)   46.43     0.91     6.58  29.84      0.22      0.43
   OUTFLOW: ID= 1 (******)   46.43     0.90     6.75  29.84      0.22      0.43
```

```
13771>
13772>
13773> ------------------------------------------------------------------------------
13774> --------------------
13775> | CALIB            |
13776> | NASHYD   (******)|   Area     (ha)=   4.24   Curve Number   (CN)= 85.0
13777> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
13778> --------------------   U.H. Tp(hrs)=   0.46
13779>
13780>      Unit Hyd Qpeak  (cms)=   0.352
13781>
13782>      PEAK FLOW       (cms)=   0.153 (i)
13783>      TIME TO PEAK    (hrs)=   6.333
13784>      RUNOFF VOLUME    (mm)=  21.490
13785>      TOTAL RAINFALL   (mm)=  48.071
13786>      RUNOFF COEFFICIENT   =   0.447
13787>
13788>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
13789>
13790> ------------------------------------------------------------------------------
13791>
13792> --------------------
13793> | ADD HYD  (******)|
13794> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
13795> --------------------          (ha)    (cms)    (hrs)     (mm)
13796>        ID1= 1 (******):     4.24   0.153     6.33    21.49
13797>      + ID2= 2 (******):    46.43   0.901     6.75    29.84
13798>        ================================================
13799>        ID = 3 (******):    50.67   1.025     6.67    29.14
13800>
13801>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
13802> ------------------------------------------------------------------------------
13803>
13804> --------------------
13805> | ADD HYD  (******)|
13806> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
13807> --------------------          (ha)    (cms)    (hrs)     (mm)
13808>        ID1= 1 (******):     2.59   0.130     6.17    21.48
13809>      + ID2= 2 (******):    50.67   1.025     6.67    29.14
13810>        ================================================
13811>        ID = 3 (******):    53.26   1.087     6.58    28.76
13812>
13813>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
13814> ------------------------------------------------------------------------------
13815> --------------------
13816> | ROUTE CHN(******)|
13817> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
13818> --------------------
13819>                <------ DATA FOR SECTION (   1.1) ------>
13820>                Distance      Elevation       Manning
13821>                    0.00         429.12        0.0500
13822>                   37.54         428.86        0.0500
13823>                   53.31         428.70        0.0500
13824>                   81.17         428.24        0.0500
13825>                   99.28         428.15    0.0500 /0.0300  Main Channel
13826>                  114.53         427.72        0.0300      Main Channel
13827>                  119.88         426.51        0.0300      Main Channel
13828>                  124.17         425.84        0.0300      Main Channel
13829>                  206.01         425.90        0.0300      Main Channel
13830>                  209.64         426.51        0.0300      Main Channel
13831>                  214.21         426.89        0.0300      Main Channel
13832>                  231.49         427.17        0.0300      Main Channel
13833>                  268.61         427.89    0.0300 /0.0500  Main Channel
13834>                  351.58         428.15        0.0500
13835>                  368.27         428.31        0.0500
13836>                  405.75         428.52        0.0500
13837>                  416.79         428.59        0.0500
13838>                  440.06         428.76        0.0500
13839>                  469.88         428.97        0.0500
13840>
13841>       <---------------------- TRAVEL TIME TABLE ----------------------->
13842>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
13843>          (m)      (m)     (cu.m.)      (cms)        (m/s)       (min)
13844>         0.16   426.00    .187E+04        9.2         0.88        3.40
13845>         0.31   426.16    .424E+04       35.4         1.49        2.00
13846>         0.47   426.32    .666E+04       74.1         1.98        1.50
13847>         0.63   426.47    .914E+04      123.7         2.41        1.23
13848>         0.79   426.63    .117E+05      182.8         2.79        1.07
13849>         0.94   426.79    .143E+05      251.2         3.13        0.95
13850>         1.10   426.95    .170E+05      323.1         3.39        0.88
13851>         1.26   427.10    .199E+05      394.0         3.52        0.84
13852>         1.42   427.26    .232E+05      479.1         3.69        0.81
13853>         1.57   427.42    .267E+05      577.3         3.86        0.77
13854>         1.73   427.58    .304E+05      687.4         4.03        0.74
13855>         1.89   427.73    .344E+05      808.6         4.20        0.71
13856>         2.05   427.89    .387E+05      927.4         4.28        0.70
13857>         2.23   428.07    .449E+05     1119.2         4.45        0.67
13858>         2.41   428.25    .531E+05     1356.2         4.56        0.65
13859>         2.59   428.43    .627E+05     1638.9         4.66        0.64
13860>         2.77   428.61    .737E+05     1955.8         4.73        0.63
13861>         2.95   428.79    .859E+05     2310.2         4.79        0.62
13862>         3.13   428.97    .996E+05     2701.5         4.84        0.61
13863>
13864>                                  <---- hydrograph ---->   <-pipe / channel->
13865>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
13866>                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
13867>    INFLOW : ID= 2 (******)   53.26     1.09     6.58   28.76      0.02      0.88
13868>    OUTFLOW: ID= 1 (******)   53.26     1.08     6.67   28.76      0.02      0.88
13869>
13870>
13871>
13872> ------------------------------------------------------------------------------
13873>
13874> --------------------
13875> | ADD HYD  (******)|
13876> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
13877> --------------------          (ha)    (cms)    (hrs)     (mm)
13878>        ID1= 1 (******):   125.79   0.855     6.67    32.91
13879>      + ID2= 2 (******):    53.26   1.083     6.67    28.76
13880>        ================================================
13881>        ID = 3 (******):   179.05   1.938     6.67    31.68
13882>
13883>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
13884> ------------------------------------------------------------------------------
13885> --------------------
13886> | CALIB            |
13887> | STANDHYD (******)|   Area     (ha)=   8.58
13888> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
13889> --------------------
13890>                              IMPERVIOUS    PERVIOUS (i)
13891>      Surface Area     (ha)=       4.98         3.60
13892>      Dep. Storage     (mm)=       2.00         4.48
13893>      Average Slope     (%)=       0.91         1.12
13894>      Length            (m)=     246.54       157.18
13895>      Mannings n           =      0.015        0.300
13896>
13897>      Max.Eff.Inten.(mm/hr)=      63.34        15.70
13898>                    over (min)        5.00        55.00
13899>      Storage Coeff.  (min)=       5.91 (ii)    50.58 (ii)
13900>      Unit Hyd. Tpeak (min)=       5.00        55.00
13901>      Unit Hyd. peak  (cms)=       0.19         0.02
13902>                                                          *TOTALS*
13903>      PEAK FLOW       (cms)=       0.83         0.09          0.854 (iii)
13904>      TIME TO PEAK    (hrs)=       6.00         6.75          6.00
13905>      RUNOFF VOLUME    (mm)=      46.07        21.49         35.74
13906>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
13907>      RUNOFF COEFFICIENT   =       0.96         0.45          0.74
13908>
13909>
13910>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
13911>             CN*  =  85.0    Ia = Dep. Storage  (Above)
13912>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
13913>            THAN THE STORAGE COEFFICIENT.
13914>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
13915>
13916> ------------------------------------------------------------------------------
13917>
13918> --------------------
13919> | ADD HYD  ( 50650)|
13920> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
13921> --------------------          (ha)    (cms)    (hrs)     (mm)
13922>        ID1= 1 (******):     8.58   0.854     6.00    35.74
13923>      + ID2= 2 (******):     7.02   0.375     6.00    24.30
13924>        ================================================
13925>        ID = 3 ( 50650):    15.60   1.229     6.00    30.60
13926>
13927>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
13928> ------------------------------------------------------------------------------
13929>
13930> --------------------
13931> | ADD HYD  ( 50650)|
13932> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
13933> --------------------          (ha)    (cms)    (hrs)     (mm)
13934>        ID1= 3 ( 50650):    15.60   1.229     6.00    30.60
13935>      + ID2= 2 (******):   179.05   1.938     6.67    31.68
13936>        ================================================
13937>        ID = 1 ( 50650):   194.64   2.268     6.50    31.59
13938>
13939>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
13940> ------------------------------------------------------------------------------
13941> --------------------
13942> | ROUTE CHN( 60650)|
13943> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
13944> --------------------
13945>                <------ DATA FOR SECTION (   1.1) ------>
13946>                Distance      Elevation       Manning
13947>                    0.00         129.45        0.0450
13948>                    6.00         129.24        0.0450
13949>                    8.00         128.92        0.0450
13950>                   10.00         128.26        0.0450
13951>                   12.00         127.37        0.0450
13952>                   14.00         126.79        0.0450
13953>                   16.00         126.20        0.0450
13954>                   18.00         125.80        0.0450
13955>                   21.00         125.29        0.0450
13956>                   24.00         124.85        0.0450
13957>                   27.00         124.54        0.0350      Main Channel
13958>                   30.00         124.62        0.0350      Main Channel
13959>                   33.00         124.84    0.0350 /0.0450  Main Channel
13960>                   36.00         125.26        0.0450
13961>                   39.00         125.86        0.0450
13962>                   42.00         126.49        0.0450
13963>                   48.00         128.97        0.0450
13964>                   54.00         129.42        0.0450
13965>
13966>       <---------------------- TRAVEL TIME TABLE ----------------------->
13967>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
13968>          (m)      (m)     (cu.m.)      (cms)        (m/s)       (min)
13969>         0.26   124.80    .390E+03        0.9         0.76        7.18
13970>         0.51   125.06    .124E+04        4.9         1.29        4.21
13971>         0.77   125.31    .239E+04       12.3         1.67        3.25
13972>         1.03   125.57    .380E+04       23.2         1.99        2.73
13973>         1.28   125.83    .544E+04       37.9         2.27        2.40
13974>         1.54   126.08    .731E+04       56.6         2.52        2.15
13975>         1.80   126.34    .937E+04       79.6         2.77        1.96
13976>         2.05   126.60    .116E+05      107.2         3.01        1.81
13977>         2.31   126.85    .140E+05      139.3         3.25        1.67
13978>         2.57   127.11    .165E+05      175.4         3.47        1.57
13979>         2.82   127.37    .191E+05      215.7         3.68        1.48
13980>         3.08   127.62    .219E+05      261.1         3.89        1.39
13981>         3.34   127.88    .247E+05      310.7         4.10        1.32
13982>         3.59   128.14    .276E+05      364.3         4.30        1.26
13983>         3.85   128.40    .307E+05      421.6         4.48        1.21
13984>         4.11   128.65    .338E+05      482.7         4.65        1.17
13985>         4.36   128.91    .371E+05      548.1         4.82        1.13
13986>         4.62   129.17    .406E+05      600.9         4.83        1.13
13987>         4.88   129.42    .446E+05      634.1         4.63        1.17
13988>
13989>                                  <---- hydrograph ---->   <-pipe / channel->
13990>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
13991>                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
13992>    INFLOW : ID= 2 ( 50650)  194.64     2.27     6.50   31.59      0.34      0.88
13993>    OUTFLOW: ID= 1 ( 60650)  194.64     2.24     6.67   31.59      0.34      0.88
13994>
13995>
13996>
13997> ------------------------------------------------------------------------------
13998> --------------------
13999> | CALIB            |
14000> | STANDHYD ( 40670)|   Area     (ha)=  50.76
14001> |ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
14002> --------------------
14003>                              IMPERVIOUS    PERVIOUS (i)
14004>      Surface Area     (ha)=      37.06        13.71
14005>      Dep. Storage     (mm)=       2.00         6.10
14006>      Average Slope     (%)=       1.50         1.50
14007>      Length            (m)=     581.73        82.00
14008>      Mannings n           =      0.015        0.280
14009>
14010>      Max.Eff.Inten.(mm/hr)=      63.34        18.78
14011>                    over (min)       10.00        35.00
14012>      Storage Coeff.  (min)=       8.51 (ii)    33.24 (ii)
14013>      Unit Hyd. Tpeak (min)=      10.00        35.00
14014>      Unit Hyd. peak  (cms)=       0.12         0.03
14015>                                                          *TOTALS*
14016>      PEAK FLOW       (cms)=       5.32         0.37          5.462 (iii)
14017>      TIME TO PEAK    (hrs)=       6.00         6.50          6.00
14018>      RUNOFF VOLUME    (mm)=      46.07        16.90         37.90
14019>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
14020>      RUNOFF COEFFICIENT   =       0.96         0.35          0.79
14021>
14022>
14023>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14024>             CN*  =  79.5    Ia = Dep. Storage  (Above)
14025>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14026>            THAN THE STORAGE COEFFICIENT.
14027>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14028>
14029> ------------------------------------------------------------------------------
14030>
14031> --------------------
14032> | ADD HYD  ( 50670)|
14033> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14034> --------------------          (ha)    (cms)    (hrs)     (mm)
14035>        ID1= 1 ( 40670):    50.76   5.462     6.00    37.90
14036>      + ID2= 2 ( 60650):   194.64   2.245     6.67    31.59
14037>        ================================================
14038>        ID = 3 ( 50670):   245.40   6.896     6.00    32.90
14039>
14040>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14041> ------------------------------------------------------------------------------
14042> --------------------
14043> | ROUTE CHN( 60670)|
14044> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
14045> --------------------
14046>                <------ DATA FOR SECTION (   1.1) ------>
14047>                Distance      Elevation       Manning
14048>                    0.00         115.77        0.0450
14049>                   20.00         115.51        0.0450
14050>                   24.00         114.73        0.0450
14051>                   28.00         113.17    0.0450 /0.0350  Main Channel
14052>                   32.00         113.16    0.0350 /0.0450  Main Channel
14053>                   36.00         114.68        0.0450
14054>                   40.00         115.05        0.0450
14055>                   44.00         115.27        0.0450
14056>                   48.00         115.46        0.0450
14057>                   52.00         115.71        0.0450
14058>                   54.00         115.77        0.0450
14059>
14060>       <---------------------- TRAVEL TIME TABLE ----------------------->
14061>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
14062>          (m)      (m)     (cu.m.)      (cms)        (m/s)       (min)
14063>         0.14   113.30    .275E+03        0.3         0.60       13.60
14064>         0.27   113.43    .612E+03        1.2         0.93        8.76
14065>         0.41   113.57    .996E+03        2.4         1.18        6.88
14066>         0.55   113.71    .143E+04        4.1         1.39        5.85
14067>         0.69   113.84    .191E+04        6.1         1.57        5.18
14068>         0.82   113.98    .244E+04        8.6         1.73        4.70
14069>         0.96   114.12    .301E+04       11.6         1.87        4.34
14070>         1.10   114.26    .363E+04       14.9         2.00        4.06
14071>         1.24   114.39    .430E+04       18.8         2.12        3.82
14072>         1.37   114.53    .502E+04       23.1         2.24        3.63
14073>         1.51   114.67    .579E+04       27.9         2.34        3.46
14074>         1.65   114.81    .664E+04       32.5         2.38        3.41
14075>         1.78   114.94    .763E+04       37.8         2.41        3.36
14076>         1.92   115.08    .878E+04       44.0         2.44        3.33
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14077>        2.06   115.22    .101E+05      50.8          2.45       3.31
14078>        2.20   115.35    .117E+05      58.8          2.46       3.30
14079>        2.33   115.49    .134E+05      68.1          2.47       3.29
14080>        2.47   115.63    .157E+05      74.2          2.30       3.53
14081>        2.61   115.77    .188E+05      85.0          2.20       3.69
14082>
14083>                                    <---- hydrograph ---->   <-pipe / channel->
14084>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
14085>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
14086>    INFLOW : ID= 2 ( 50670)  245.40     6.90    6.00  32.90      0.73      1.61
14087>    OUTFLOW: ID= 1 ( 60670)  245.40     6.60    6.08  32.90      0.71      1.59
14088>
14089>
14090>
14091> ------------------------------------------------------------------------------
14092> --------------------
14093> | CALIB            |
14094> | STANDHYD ( 40700)|   Area     (ha)=  10.86
14095> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
14096> --------------------
14097>                              IMPERVIOUS    PERVIOUS (i)
14098>      Surface Area     (ha)=       6.22         4.63
14099>      Dep. Storage     (mm)=       2.00         8.04
14100>      Average Slope     (%)=       2.30         2.30
14101>      Length            (m)=     269.03        47.00
14102>      Mannings n           =      0.015        0.350
14103>
14104>      Max.Eff.Inten.(mm/hr)=      63.34        22.18
14105>                  over (min)       5.00        25.00
14106>      Storage Coeff.  (min)=       4.71 (ii)   21.38 (ii)
14107>      Unit Hyd. Tpeak (min)=       5.00        25.00
14108>      Unit Hyd. peak  (cms)=       0.22         0.05
14109>                                                          *TOTALS*
14110>      PEAK FLOW       (cms)=       1.02         0.16          1.111 (iii)
14111>      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
14112>      RUNOFF VOLUME    (mm)=      46.07        16.65         32.86
14113>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
14114>      RUNOFF COEFFICIENT   =       0.96         0.35          0.68
14115>
14116> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
14117>
14118>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14119>           CN*  =  80.7    Ia = Dep. Storage  (Above)
14120>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14121>           THAN THE STORAGE COEFFICIENT.
14122>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14123>
14124> ------------------------------------------------------------------------------
14125>
14126> --------------------
14127> | ADD HYD  ( 50680)|
14128> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14129> --------------------         (ha)    (cms)    (hrs)     (mm)
14130>         ID1= 1 ( 40700):    10.86   1.111     6.00    32.86
14131>       + ID2= 2 ( 60670):   245.40   6.601     6.08    32.90
14132>         ================================================
14133>         ID = 3 ( 50680):   256.26   7.167     6.08    32.90
14134>
14135>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14136> ------------------------------------------------------------------------------
14137> --------------------
14138> | CALIB            |
14139> | STANDHYD ( 40680)|   Area     (ha)=   1.20
14140> |ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
14141> --------------------
14142>                              IMPERVIOUS    PERVIOUS (i)
14143>      Surface Area     (ha)=       0.50         0.69
14144>      Dep. Storage     (mm)=       2.00         7.98
14145>      Average Slope     (%)=       0.60         0.60
14146>      Length            (m)=      89.27        69.00
14147>      Mannings n           =      0.015        0.350
14148>
14149>      Max.Eff.Inten.(mm/hr)=      63.34        13.22
14150>                  over (min)       5.00        45.00
14151>      Storage Coeff.  (min)=       3.64 (ii)   42.26 (ii)
14152>      Unit Hyd. Tpeak (min)=       5.00        45.00
14153>      Unit Hyd. peak  (cms)=       0.25         0.03
14154>                                                          *TOTALS*
14155>      PEAK FLOW       (cms)=       0.08         0.02          0.085 (iii)
14156>      TIME TO PEAK    (hrs)=       6.00         6.67          6.00
14157>      RUNOFF VOLUME    (mm)=      46.07        16.28         27.85
14158>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
14159>      RUNOFF COEFFICIENT   =       0.96         0.34          0.58
14160>
14161> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
14162>
14163>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14164>           CN*  =  80.0    Ia = Dep. Storage  (Above)
14165>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14166>           THAN THE STORAGE COEFFICIENT.
14167>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14168>
14169> ------------------------------------------------------------------------------
14170> --------------------
14171> | CALIB            |
14172> | STANDHYD ( 40690)|   Area     (ha)=  25.49
14173> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
14174> --------------------
14175>                              IMPERVIOUS    PERVIOUS (i)
14176>      Surface Area     (ha)=       7.93        17.56
14177>      Dep. Storage     (mm)=       2.00         8.01
14178>      Average Slope     (%)=       3.10         3.10
14179>      Length            (m)=     412.26        40.00
14180>      Mannings n           =      0.015        0.350
14181>
14182>      Max.Eff.Inten.(mm/hr)=      63.34        25.22
14183>                  over (min)       5.00        20.00
14184>      Storage Coeff.  (min)=       5.57 (ii)   18.71 (ii)
14185>      Unit Hyd. Tpeak (min)=       5.00        20.00
14186>      Unit Hyd. peak  (cms)=       0.20         0.06
14187>                                                          *TOTALS*
14188>      PEAK FLOW       (cms)=       1.18         0.62          1.579 (iii)
14189>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
14190>      RUNOFF VOLUME    (mm)=      46.07        15.38         23.82
14191>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
14192>      RUNOFF COEFFICIENT   =       0.96         0.32          0.50
14193>
14194>
14195>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14196>           CN*  =  78.5    Ia = Dep. Storage  (Above)
14197>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14198>           THAN THE STORAGE COEFFICIENT.
14199>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14200>
14201> ------------------------------------------------------------------------------
14202>
14203> --------------------
14204> | ADD HYD  ( 50690)|
14205> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14206> --------------------         (ha)    (cms)    (hrs)     (mm)
14207>         ID1= 1 ( 40680):     1.20   0.085     6.00    27.85
14208>       + ID2= 2 ( 40690):    25.49   1.579     6.00    23.82
14209>         ================================================
14210>         ID = 3 ( 50690):    26.69   1.664     6.00    24.00
14211>
14212>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14213> ------------------------------------------------------------------------------
14214>
14215> --------------------
14216> | ADD HYD  ( 50700)|
14217> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14218> --------------------         (ha)    (cms)    (hrs)     (mm)
14219>         ID1= 1 ( 50680):   256.26   7.167     6.08    32.90
14220>       + ID2= 2 ( 50690):    26.69   1.664     6.00    24.00
14221>         ================================================
14222>         ID = 3 ( 50700):   282.95   8.559     6.00    32.06
14223>
14224>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14225> ------------------------------------------------------------------------------
14226> --------------------
14227> | ROUTE CHN( 60700)|
14228> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
14229> --------------------
14230>                <------ DATA FOR SECTION (   1.1) ------>
14231>                Distance      Elevation       Manning
14232>                   0.00         109.54         0.0450
14233>                   4.00         108.85         0.0450
14234>                   8.00         108.76         0.0450
14235>                  12.00         108.31         0.0450
14236>                  16.00         107.44         0.0450
14237>                  20.00         107.22         0.0450
14238>                  24.00         107.06         0.0450
14239>                  28.00         107.10         0.0450
14240>                  32.00         107.04         0.0450
14241>                  36.00         106.98         0.0450
14242>                  40.00         106.83         0.0350      Main Channel
14243>                  44.00         106.49         0.0350      Main Channel
14244>                  48.00         106.92    0.0350 /0.0450   Main Channel
14245>                  52.00         107.19         0.0450
14246>                  56.00         107.11         0.0450
14247>                  60.00         107.14         0.0450
14248>                  64.00         107.27         0.0450
14249>                  68.00         107.71         0.0450
14250>                  72.00         108.37         0.0450
14251>                  80.00         109.55         0.0450
14252>
14253>      <---------------------- TRAVEL TIME TABLE ---------------------->
14254>       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
14255>         (m)      (m)    (cu.m.)      (cms)        (m/s)      (min)
14256>        0.12   106.60    .128E+03        0.1         0.43      35.47
14257>        0.23   106.72    .513E+03        0.4         0.69      22.34
14258>        0.35   106.83    .115E+04        1.1         0.90      17.05
14259>        0.52   107.00    .277E+04        3.6         1.21      12.69
14260>        0.69   107.17    .675E+04        8.9         1.21      12.64
14261>        0.86   107.34    .135E+05       19.9         1.35      11.35
14262>        1.02   107.51    .211E+05       36.3         1.58       9.70
14263>        1.19   107.68    .291E+05       57.8         1.82       8.39
14264>        1.36   107.85    .375E+05       84.0         2.06       7.43
14265>        1.53   108.02    .461E+05      114.5         2.28       6.71
14266>        1.70   108.19    .550E+05      149.1         2.49       6.15
14267>        1.87   108.35    .642E+05      187.4         2.68       5.71
14268>        2.04   108.52    .737E+05      228.8         2.85       5.37
14269>        2.21   108.69    .837E+05      274.1         3.01       5.09
14270>        2.37   108.86    .942E+05      316.2         3.08       4.97
14271>        2.54   109.03    .105E+06      372.6         3.25       4.72
14272>        2.71   109.20    .117E+06      433.4         3.40       4.50
14273>        2.88   109.37    .129E+06      498.6         3.55       4.31
14274>        3.05   109.54    .141E+06      568.2         3.70       4.14
14275>
14276>                                    <---- hydrograph ---->   <-pipe / channel->
14277>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
14278>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
14279>    INFLOW : ID= 2 ( 50700)  282.95     8.56    6.00  32.06      0.68      1.21
14280>    OUTFLOW: ID= 1 ( 60700)  282.95     6.71    6.17  32.06      0.62      1.21
14281>
14282>
14283>
14284> ------------------------------------------------------------------------------
14285> --------------------
14286> | CALIB            |
14287> | STANDHYD ( 40710)|   Area     (ha)=   6.35
14288> |ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
14289> --------------------
14290>                              IMPERVIOUS    PERVIOUS (i)
14291>      Surface Area     (ha)=       1.57         4.79
14292>      Dep. Storage     (mm)=       2.00         8.94
14293>      Average Slope     (%)=       3.90         3.90
14294>      Length            (m)=     205.82        41.00
14295>      Mannings n           =      0.015        0.360
14296>
14297>      Max.Eff.Inten.(mm/hr)=      63.34        25.25
14298>                  over (min)       5.00        20.00
14299>      Storage Coeff.  (min)=       3.43 (ii)   16.08 (ii)
14300>      Unit Hyd. Tpeak (min)=       5.00        20.00
14301>      Unit Hyd. peak  (cms)=       0.26         0.06
14302>                                                          *TOTALS*
14303>      PEAK FLOW       (cms)=       0.23         0.18          0.346 (iii)
14304>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
14305>      RUNOFF VOLUME    (mm)=      46.07        15.36         21.73
14306>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
14307>      RUNOFF COEFFICIENT   =       0.96         0.32          0.45
14308>
14309> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
14310>
14311>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14312>           CN*  =  79.5    Ia = Dep. Storage  (Above)
14313>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14314>           THAN THE STORAGE COEFFICIENT.
14315>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14316>
14317> ------------------------------------------------------------------------------
14318>
14319> --------------------
14320> | ADD HYD  ( 50710)|
14321> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14322> --------------------         (ha)    (cms)    (hrs)     (mm)
14323>         ID1= 1 ( 40710):     6.35   0.346     6.00    21.73
14324>       + ID2= 2 ( 60700):   282.95   6.710     6.17    32.06
14325>         ================================================
14326>         ID = 3 ( 50710):   289.30   6.935     6.17    31.83
14327>
14328>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14329> ------------------------------------------------------------------------------
14330> --------------------
14331> | CALIB            |
14332> | STANDHYD ( 40720)|   Area     (ha)=  25.04
14333> |ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
14334> --------------------
14335>                              IMPERVIOUS    PERVIOUS (i)
14336>      Surface Area     (ha)=      21.12         3.92
14337>      Dep. Storage     (mm)=       2.00         5.64
14338>      Average Slope     (%)=       3.00         3.00
14339>      Length            (m)=     408.55        40.00
14340>      Mannings n           =      0.015        0.270
14341>
14342>      Max.Eff.Inten.(mm/hr)=      63.34        31.18
14343>                  over (min)       5.00        10.00
14344>      Storage Coeff.  (min)=       5.59 (ii)    9.61 (ii)
14345>      Unit Hyd. Tpeak (min)=       5.00        10.00
14346>      Unit Hyd. peak  (cms)=       0.20         0.11
14347>                                                          *TOTALS*
14348>      PEAK FLOW       (cms)=       3.52         0.24          3.756 (iii)
14349>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
14350>      RUNOFF VOLUME    (mm)=      46.07        17.63         41.42
14351>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
14352>      RUNOFF COEFFICIENT   =       0.96         0.37          0.86
14353>
14354>
14355>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14356>           CN*  =  80.1    Ia = Dep. Storage  (Above)
14357>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14358>           THAN THE STORAGE COEFFICIENT.
14359>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14360>
14361> ------------------------------------------------------------------------------
14362> --------------------
14363> | RESERVOIR( 70150)|     OVERFLOW IS ON
14364> | IN= 2---> OUT= 1 |
14365> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
14366> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
14367>                             0.0000      0.0000  |    0.7080      1.0040
14368>                             0.2890      0.3890  |    0.7750      1.0700
14369>                             0.3270      0.4500  |    0.9210      1.2580
14370>                             0.3600      0.6030  |    1.0000      1.3280
14371>                             0.3900      0.6540  |    1.0820      1.3980
14372>                             0.4190      0.7110  |    1.1670      1.4690
14373>                             0.4450      0.7680  |    1.2550      1.5390
14374>                             0.4700      0.8260  |    1.3460      1.6090
14375>                             0.4960      0.8830  |    1.9470      1.9930
14376>                             0.6450      0.9400  |    0.0000      0.0000
14377>
14378>                                 AREA     QPEAK     TPEAK       R.V.
14379>                                 (ha)     (cms)     (hrs)       (mm)
14380>    INFLOW : ID= 2 ( 40720)     25.037     3.756      6.00      41.42
14381>    OUTFLOW: ID= 1 ( 70150)     25.037     0.374      6.58      41.41
14382>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
```

```
                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.95
                    TIME SHIFT OF PEAK FLOW         (min)= 35.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.6268

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  --------------------------
  | Junction Command(70151) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70150)    0.00      0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00      0.00    0.00     0.00

  ------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=      63.34        26.54
                  over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.67 (ii)   16.34 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.82         0.14          1.910 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      46.07        16.38          38.65
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.34           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.2230      0.3310
                          0.0580      0.0840   |    0.2500      0.3590
                          0.0780      0.1040   |    0.2790      0.3870
                          0.0930      0.1240   |    0.3090      0.4160
                          0.1060      0.1440   |    0.3750      0.4780
                          0.1180      0.1640   |    0.4110      0.5120
                          0.1280      0.1840   |    0.4470      0.5450
                          0.1590      0.2550   |    0.5250      0.6130
                          0.1770      0.2790   |    0.7390      0.9130
                          0.1990      0.3030   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155     1.910      6.00      38.65
   OUTFLOW: ID= 1 ( 70160)     14.155     0.217      6.58      38.62
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.34
                    TIME SHIFT OF PEAK FLOW         (min)= 35.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.3237

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  --------------------------
  | Junction Command(70161) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70160)    0.00      0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00      0.00    0.00     0.00

  ------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50710):   289.30   6.935     6.17    31.83
     + ID2= 2 ( 70150):    25.04   0.374     6.58    41.41
       ==========================================================
       ID = 3 ( 50730):   314.34   7.289     6.17    32.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   314.34   7.289     6.17    32.59
     + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
       ==========================================================
       ID = 1 ( 50730):   314.34   7.289     6.17    32.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50730):   314.34   7.289     6.17    32.59
     + ID2= 2 ( 70160):    14.15   0.217     6.58    38.62
       ==========================================================
       ID = 3 ( 50730):   328.50   7.483     6.17    32.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   328.50   7.483     6.17    32.85
     + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
       ==========================================================
       ID = 1 ( 50730):   328.50   7.483     6.17    32.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         96.28        0.0450
                  9.00         95.39        0.0450
                 12.00         94.87        0.0450
                 15.00         94.17        0.0450
                 18.00         93.95        0.0450
                 21.00         94.01        0.0450
                 24.00         93.92        0.0450
                 27.00         93.98    0.0450 /0.0350  Main Channel
                 30.00         93.33        0.0350      Main Channel
                 32.00         93.73    0.0350 /0.0450  Main Channel
                 34.00         94.58        0.0450
                 35.00         95.06        0.0450
                 40.00         95.32        0.0450
                 45.00         96.12        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.13    93.46    .164E+03       0.0          0.36       89.51
       0.26    93.60    .654E+03       0.2          0.57       56.39
       0.40    93.73    .147E+04       0.6          0.75       43.03
       0.55    93.88    .274E+04       1.4          0.99       32.63
       0.70    94.03    .550E+04       2.8          1.00       32.28
       0.85    94.18    .104E+05       5.8          1.08       29.94
       1.00    94.33    .159E+05      10.1          1.24       26.04
       1.15    94.48    .216E+05      15.6          1.41       22.97
       1.29    94.63    .275E+05      22.2          1.57       20.64
       1.44    94.78    .338E+05      29.9          1.72       18.84
       1.59    94.93    .404E+05      38.6          1.86       17.44
       1.74    95.08    .473E+05      48.0          1.97       16.40
       1.89    95.23    .549E+05      58.1          2.05       15.76
       2.04    95.38    .637E+05      70.1          2.14       15.14
       2.19    95.53    .731E+05      83.0          2.21       14.67
       2.34    95.68    .833E+05      97.5          2.27       14.23
       2.49    95.83    .941E+05     113.5          2.34       13.82
       2.64    95.98    .106E+06     131.2          2.41       13.42
       2.79    96.13    .118E+06     150.7          2.48       13.05

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  328.50     7.48    6.17  32.85      0.90       1.14
   OUTFLOW: ID= 1 ( 60730)  328.50     5.39    6.67  32.85      0.82       1.07

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| CALIB            |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      56.24        13.19
     Dep. Storage     (mm)=       2.00         5.50
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     680.34        43.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        28.56
                  over (min)      10.00        25.00
     Storage Coeff.  (min)=       9.00 (ii)   22.38 (ii)
     Unit Hyd. Tpeak (min)=      10.00        25.00
     Unit Hyd. peak  (cms)=       0.12         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.95         0.48          8.212 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=      46.07        17.47          40.35
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.36           0.84

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)     69.429      8.212      6.00      40.35
   OUTFLOW: ID= 1 ( 70170)     69.429      0.654      7.17      40.33
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  7.96
                    TIME SHIFT OF PEAK FLOW         (min)= 70.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.9808

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  --------------------------
  | Junction Command(70171) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70170)    0.00      0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00      0.00    0.00     0.00

  ------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 60730):   328.50   5.392     6.67    32.85
     + ID2= 2 ( 70170):    69.43   0.654     7.17    40.33
       ==========================================================
       ID = 3 ( 50770):   397.92   5.987     6.67    34.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50770):   397.92   5.987     6.67    34.16
     + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
       ==========================================================
       ID = 1 ( 50770):   397.92   5.987     6.67    34.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         92.38        0.0450
                  3.00         90.34        0.0450
                  6.00         89.94        0.0450
                  9.00         89.83        0.0450
                 12.00         89.80        0.0450
                 15.00         89.72        0.0450
```

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                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15         0.0350     Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76         0.0450
                  30.00         89.78         0.0450
                  33.00         89.79         0.0450
                  36.00         89.80         0.0450
                  39.00         89.72         0.0450
                  42.00         90.35         0.0450
                  45.00         91.36         0.0450
                  48.00         92.10         0.0450
                  51.00         92.21         0.0450
                  54.00         92.34         0.0450
                  56.00         92.35         0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15    89.29    .298E+02       0.0         0.31       13.27
        0.29    89.44    .119E+03       0.2         0.50        8.36
        0.44    89.58    .268E+03       0.7         0.65        6.38
        0.61    89.76    .588E+03       1.9         0.79        5.25
        0.78    89.93    .179E+04       5.1         0.71        5.86
        0.96    90.10    .329E+04      11.4         0.87        4.79
        1.13    90.27    .489E+04      20.2         1.03        4.03
        1.30    90.45    .656E+04      31.5         1.19        3.47
        1.47    90.62    .828E+04      45.0         1.35        3.06
        1.65    90.79    .100E+05      60.5         1.50        2.76
        1.82    90.97    .118E+05      77.9         1.64        2.53
        1.99    91.14    .136E+05      97.1         1.77        2.34
        2.17    91.31    .155E+05     118.1         1.90        2.18
        2.34    91.48    .173E+05     140.6         2.02        2.06
        2.51    91.66    .193E+05     164.7         2.13        1.95
        2.68    91.83    .212E+05     190.5         2.23        1.86
        2.86    92.00    .232E+05     218.0         2.33        1.78
        3.03    92.18    .253E+05     242.7         2.39        1.74
        3.20    92.35    .275E+05     262.6         2.37        1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  397.92     5.99    6.67  34.16      0.81      0.73
   OUTFLOW: ID= 1 ( 60770)  397.92     5.94    6.83  34.16      0.81      0.73



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78        11.79
     Dep. Storage     (mm)=       2.00         8.70
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     404.74        43.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      63.34        19.36
               over (min)        5.00        30.00
     Storage Coeff.  (min)=       6.85 (ii)   25.15 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.18         0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.00         0.32        2.137 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42        6.00
     RUNOFF VOLUME    (mm)=      46.07        14.87       30.47
     TOTAL RAINFALL   (mm)=      48.07        48.07       48.07
     RUNOFF COEFFICIENT   =       0.96         0.31        0.63

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57   2.137     6.00    30.47
     + ID2= 2 ( 60770):   397.92   5.939     6.83    34.16
       ================================================
       ID = 3 ( 50780):   422.50   6.305     6.75    33.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        24.23
               over (min)        5.00        25.00
     Storage Coeff.  (min)=       5.26 (ii)   23.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.21         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.87         0.10        0.928 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25        6.00
     RUNOFF VOLUME    (mm)=      46.07        17.71       35.52
     TOTAL RAINFALL   (mm)=      48.07        48.07       48.07
     RUNOFF COEFFICIENT   =       0.96         0.37        0.74

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      63.34        19.39
               over (min)        5.00        25.00
     Storage Coeff.  (min)=       4.37 (ii)   24.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.23         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.80         0.01        0.808 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33        6.00
     RUNOFF VOLUME    (mm)=      46.07        15.17       43.04
     TOTAL RAINFALL   (mm)=      48.07        48.07       48.07
     RUNOFF COEFFICIENT   =       0.96         0.32        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 60780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40790):    24.57   2.137     6.00    30.47
     + ID2= 2 ( 40800):    13.33   1.736     6.00    38.42
       ================================================
       ID = 3 ( 60780):   397.92   5.939     6.83    34.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60780)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         88.54         0.0450
                  3.00         88.18         0.0450
                  6.00         87.54         0.0450
                  9.00         87.44         0.0450
                 12.00         87.13         0.0450
                 15.00         87.23         0.0450
                 18.00         87.18         0.0450
                 21.00         86.49    0.0450 /0.0350  Main Channel
                 24.00         85.82         0.0350     Main Channel
                 27.00         86.44    0.0350 /0.0450  Main Channel
                 30.00         87.18         0.0450
                 33.00         87.16         0.0450
                 36.00         87.25         0.0450
                 39.00         87.46         0.0450
                 42.00         87.70         0.0450
                 45.00         87.80         0.0450
                 48.00         88.00         0.0450
                 49.00         88.12         0.0450
                 50.00         88.23         0.0450
                 52.00         88.59         0.0450

     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50780)|
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.7780      0.6570
                           0.0040      0.0150   |    1.1550      0.7720
                           0.0090      0.0810   |    1.5780      0.8930
                           0.0120      0.1550   |    1.9240      0.9870
                           0.0140      0.2370   |    2.4190      1.1190
                           0.0160      0.3260   |    2.9510      1.2560
                           0.0620      0.3720   |    3.5980      1.3270
                           0.2560      0.4700   |    4.5570      1.3990
                           0.5310      0.5740   |    5.7230      1.4730

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332      1.736      6.00      38.42
   OUTFLOW: ID= 1 ( 70180)     13.332      0.091      8.00      38.35
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.27
                  TIME SHIFT OF PEAK FLOW         (min)=120.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3870

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  -------------------------
  | Junction Command(70181) |
  -------------------------

                          AREA     QPEAK   TPEAK     R.V.
                          (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41         2.16
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250

     Max.Eff.Inten.(mm/hr)=      63.34        43.06
               over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.98 (ii)   13.86 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.24         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.15        0.350 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=      47.07        24.70       32.46
     TOTAL RAINFALL   (mm)=      48.07        48.07       48.07
     RUNOFF COEFFICIENT   =       0.98         0.51        0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40805):     3.57   0.350     6.00    32.46
     + ID2= 2 ( 70180):    13.33   0.091     8.00    38.35
       ================================================
       ID = 3 ( 50790):    16.90   0.364     6.00    37.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50790):    16.90   0.364     6.00    37.11
     + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
       ================================================
       ID = 1 ( 50790):    16.90   0.364     6.00    37.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50780):   422.50   6.305     6.75    33.94
     + ID2= 2 ( 50790):    16.90   0.364     6.00    37.11
       ================================================
       ID = 3 ( 50800):   439.40   6.417     6.75    34.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 50800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         88.54         0.0450
                  3.00         88.18         0.0450
                  6.00         87.54         0.0450
                  9.00         87.44         0.0450
                 12.00         87.13         0.0450
                 15.00         87.23         0.0450
                 18.00         87.18         0.0450
                 21.00         86.49    0.0450 /0.0350  Main Channel
                 24.00         85.82         0.0350     Main Channel
                 27.00         86.44    0.0350 /0.0450  Main Channel
                 30.00         87.18         0.0450
                 33.00         87.16         0.0450
                 36.00         87.25         0.0450
                 39.00         87.46         0.0450
                 42.00         87.70         0.0450
                 45.00         87.80         0.0450
                 48.00         88.00         0.0450
                 49.00         88.12         0.0450
                 50.00         88.23         0.0450
                 52.00         88.59         0.0450
```

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	85.95	.779E+02	0.0	0.37	48.75
0.25	86.07	.312E+03	0.2	0.59	30.71
0.37	86.19	.701E+03	0.5	0.77	23.44
0.49	86.32	.125E+04	1.1	0.94	19.35
0.62	86.44	.195E+04	1.9	1.09	16.67
0.77	86.59	.299E+04	3.8	1.36	13.29
0.92	86.74	.424E+04	6.2	1.59	11.42
1.07	86.89	.570E+04	9.3	1.77	10.25
1.22	87.04	.736E+04	13.0	1.92	9.44
1.37	87.19	.938E+04	16.8	1.94	9.33
1.52	87.34	.134E+05	22.9	1.86	9.74
1.66	87.49	.182E+05	31.1	1.86	9.72
1.81	87.64	.237E+05	41.6	1.91	9.51
1.96	87.79	.298E+05	53.9	1.96	9.22
2.11	87.94	.365E+05	68.9	2.05	8.84
2.26	88.09	.437E+05	86.5	2.15	8.43
2.41	88.24	.513E+05	106.2	2.25	8.04
2.56	88.39	.592E+05	128.2	2.36	7.69
2.71	88.54	.674E+05	152.5	2.46	7.36

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50800)	439.40	6.42	6.75	34.06	0.93	1.60
OUTFLOW: ID= 1 (60800)	439.40	6.31	6.92	34.06	0.92	1.59

CALIB	
STANDHYD (40820)	Area (ha)= 14.21
ID= 1 DT= 5.0 min	Total Imp(%)= 20.97 Dir. Conn.(%)= 12.98

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	2.98	11.23	
Dep. Storage	(mm)=	2.00	9.57	
Average Slope	(%)=	2.30	2.30	
Length	(m)=	307.74	44.00	
Mannings n	=	0.015	0.390	
Max.Eff.Inten.	(mm/hr)=	63.34	17.32	
over	(min)	5.00	25.00	
Storage Coeff.	(min)=	5.11 (ii)	23.98 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	25.00	
Unit Hyd. peak	(cms)=	0.21	0.05	
				TOTALS
PEAK FLOW	(cms)=	0.31	0.29	0.457 (iii)
TIME TO PEAK	(hrs)=	6.00	6.33	6.00
RUNOFF VOLUME	(mm)=	46.07	12.81	17.13
TOTAL RAINFALL	(mm)=	48.07	48.07	48.07
RUNOFF COEFFICIENT	=	0.96	0.27	0.36

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50820)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40820):	14.21	0.457	6.00	17.13
+ ID2= 2 (60800):	439.40	6.310	6.92	34.06
ID = 3 (50820):	453.60	6.469	6.92	33.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50830)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50500):	1213.24	25.509	7.00	29.54
+ ID2= 2 (50820):	453.60	6.469	6.92	33.53
ID = 3 (50830):	1666.85	31.933	7.00	30.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60830)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	82.12	0.0450	
20.00	81.53	0.0450	
24.00	81.26	0.0450	
28.00	81.27	0.0450	
32.00	80.34	0.0450 /0.0350	Main Channel
36.00	79.95	0.0350	Main Channel
40.00	80.78	0.0450	
44.00	81.45	0.0450	
48.00	81.53	0.0450	
52.00	81.49	0.0450	
56.00	81.51	0.0450	
60.00	81.58	0.0450	
64.00	81.58	0.0450	
68.00	81.61	0.0450	
72.00	81.75	0.0450	
80.00	82.07	0.0450	

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	80.05	.555E+01	0.0	0.24	5.45
0.19	80.14	.222E+02	0.1	0.38	3.43
0.29	80.24	.499E+02	0.3	0.50	2.62
0.39	80.34	.888E+02	0.7	0.60	2.16
0.50	80.45	.146E+03	1.4	0.77	1.68
0.62	80.57	.213E+03	2.5	0.91	1.43
0.73	80.68	.290E+03	3.8	1.02	1.27
0.85	80.80	.375E+03	5.4	1.13	1.15
0.96	80.91	.471E+03	7.6	1.26	1.03
1.08	81.03	.578E+03	10.1	1.37	0.95
1.19	81.14	.695E+03	13.0	1.46	0.89
1.31	81.26	.823E+03	16.2	1.53	0.85
1.43	81.37	.100E+04	19.7	1.53	0.85
1.54	81.49	.121E+04	24.1	1.56	0.84
1.66	81.60	.155E+04	29.0	1.46	0.89
1.77	81.72	.204E+04	36.4	1.39	0.93
1.89	81.84	.259E+04	45.6	1.38	0.95
2.00	81.95	.320E+04	56.7	1.38	0.94
2.12	82.07	.387E+04	69.6	1.40	0.93

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50830)	1666.85	31.93	7.00	30.63	1.70	1.43
OUTFLOW: ID= 1 (60830)	1666.85	31.93	7.00	30.63	1.70	1.43

CALIB	
STANDHYD (40830)	Area (ha)= 45.51
ID= 1 DT= 5.0 min	Total Imp(%)= 66.71 Dir. Conn.(%)= 53.45

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	30.36	15.15
Dep. Storage	(mm)=	2.00	5.54
Average Slope	(%)=	1.30	1.30
Length	(m)=	550.83	40.00
Mannings n	=	0.015	0.270
Max.Eff.Inten.	(mm/hr)=	63.34	45.11
over	(min)	10.00	25.00
Storage Coeff.	(min)=	8.60 (ii)	20.16 (ii)
Unit Hyd. Tpeak	(min)=	10.00	25.00
Unit Hyd. peak	(cms)=	0.12	0.05
			TOTALS
PEAK FLOW	(cms)=	3.53	0.92 4.064 (iii)
TIME TO PEAK	(hrs)=	6.00	6.25 6.00
RUNOFF VOLUME	(mm)=	46.07	20.73 34.27
TOTAL RAINFALL	(mm)=	48.07	48.07 48.07
RUNOFF COEFFICIENT	=	0.96	0.43 0.71

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (40840)	Area (ha)= 2.04
ID= 1 DT= 5.0 min	Total Imp(%)= 22.24 Dir. Conn.(%)= 14.44

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.45	1.59
Dep. Storage	(mm)=	2.00	9.61
Average Slope	(%)=	3.20	3.20
Length	(m)=	116.69	69.00
Mannings n	=	0.015	0.370
Max.Eff.Inten.	(mm/hr)=	63.34	15.36
over	(min)	5.00	30.00
Storage Coeff.	(min)=	2.59 (ii)	25.34 (ii)
Unit Hyd. Tpeak	(min)=	5.00	30.00
Unit Hyd. peak	(cms)=	0.29	0.04
			TOTALS
PEAK FLOW	(cms)=	0.05	0.04 0.069 (iii)
TIME TO PEAK	(hrs)=	6.00	6.42 6.00
RUNOFF VOLUME	(mm)=	46.07	13.38 18.09
TOTAL RAINFALL	(mm)=	48.07	48.07 48.07
RUNOFF COEFFICIENT	=	0.96	0.28 0.38

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50840)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40830):	45.51	4.064	6.00	34.27
+ ID2= 2 (40840):	2.04	0.069	6.00	18.09
ID = 3 (50840):	47.56	4.133	6.00	33.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50840)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50840):	47.56	4.133	6.00	33.58
+ ID2= 2 (60830):	1666.85	31.927	7.00	30.63
ID = 1 (50840):	1714.40	32.528	7.00	30.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60840)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	82.18	0.0450	
32.00	79.04	0.0450	
40.00	78.76	0.0450	
48.00	78.58	0.0450	
56.00	78.21	0.0450	
64.00	76.89	0.0350	Main Channel
72.00	78.08	0.0450	
80.00	79.44	0.0450	
88.00	80.28	0.0450	
96.00	80.92	0.0450	
104.00	81.29	0.0450	
112.00	81.62	0.0450	
120.00	81.76	0.0450	
128.00	81.81	0.0450	
140.00	82.02	0.0450	

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.27	77.16	.320E+03	0.2	0.48	24.00
0.54	77.43	.128E+04	1.4	0.75	15.12
0.81	77.70	.288E+04	4.2	0.99	11.54
1.08	77.97	.512E+04	9.0	1.20	9.53
1.35	78.24	.799E+04	16.6	1.42	8.02
1.62	78.51	.119E+05	26.9	1.54	7.40
1.89	78.78	.176E+05	41.0	1.59	7.15
2.16	79.05	.252E+05	62.9	1.71	6.68
2.43	79.32	.341E+05	93.9	1.89	6.05
2.70	79.59	.438E+05	131.1	2.05	5.56
2.97	79.86	.544E+05	175.1	2.20	5.18
3.24	80.13	.660E+05	226.4	2.35	4.86
3.51	80.40	.787E+05	284.9	2.48	4.60
3.77	80.67	.924E+05	351.1	2.60	4.39
4.04	80.94	.107E+06	425.7	2.72	4.20
4.31	81.21	.124E+06	507.1	2.81	4.06
4.58	81.48	.141E+06	598.4	2.90	3.94
4.85	81.75	.161E+06	695.9	2.96	3.86
5.12	82.02	.185E+06	800.9	2.97	3.85

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50840)	1714.40	32.53	7.00	30.71	1.73	1.56
OUTFLOW: ID= 1 (60840)	1714.40	32.13	7.08	30.71	1.71	1.56

CALIB	
STANDHYD (40850)	Area (ha)= 26.33
ID= 1 DT= 5.0 min	Total Imp(%)= 30.92 Dir. Conn.(%)= 24.62

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.14	18.19
Dep. Storage	(mm)=	2.00	7.29
Average Slope	(%)=	2.00	2.00
Length	(m)=	418.93	142.00
Mannings n	=	0.015	0.310
Max.Eff.Inten.	(mm/hr)=	63.34	13.19
over	(min)	5.00	50.00
Storage Coeff.	(min)=	6.41 (ii)	45.03 (ii)

```
      Unit Hyd. Tpeak (min)=       5.00        50.00
      Unit Hyd. peak  (cms)=       0.18         0.02
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.07         0.38         1.163 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.75          6.00
      RUNOFF VOLUME    (mm)=      46.07        15.74         23.21
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.33          0.48

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

ADD HYD (50850)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40850):	26.33	1.163	6.00	23.21
+ ID2= 2 (60840):	1714.40	32.131	7.08	30.71
ID = 3 (50850):	1740.73	32.499	7.08	30.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (40880)	Area (ha)= 56.14		
ID= 1 DT= 5.0 min	Total Imp(%)= 37.00	Dir. Conn.(%)= 34.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	20.77	35.37
Dep. Storage (mm)=	2.00	8.79
Average Slope (%)=	1.30	1.30
Length (m)=	611.77	120.00
Mannings n =	0.015	0.330
Max.Eff.Inten.(mm/hr)=	63.34	11.77
over (min)	10.00	55.00
Storage Coeff. (min)=	9.16 (ii)	52.32 (ii)
Unit Hyd. Tpeak (min)=	10.00	55.00
Unit Hyd. peak (cms)=	0.12	0.02

				TOTALS
PEAK FLOW	(cms)=	2.72	0.63	2.844 (iii)
TIME TO PEAK	(hrs)=	6.00	6.83	6.00
RUNOFF VOLUME	(mm)=	46.07	15.63	25.98
TOTAL RAINFALL	(mm)=	48.07	48.07	48.07
RUNOFF COEFFICIENT	=	0.96	0.33	0.54

```
        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

ROUTE CHN(60880)			
IN= 2---> OUT= 1	Routing time step (min)'= 5.00		

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	85.55	0.0450	
24.00	85.23	0.0450	
28.00	85.17	0.0450	
32.00	85.07	0.0450	
36.00	84.96	0.0350	Main Channel
40.00	84.96	0.0350	Main Channel
44.00	85.00	0.0350 /0.0450	Main Channel
48.00	85.03	0.0450	
52.00	85.18	0.0450	
56.00	85.22	0.0450	
60.00	85.31	0.0450	
64.00	85.33	0.0450	
68.00	85.38	0.0450	
80.00	85.59	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.01	84.96	.992E+01	0.0	0.05	238.32
0.04	84.99	.159E+03	0.0	0.21	57.53
0.07	85.03	.408E+03	0.2	0.32	38.32
0.10	85.06	.751E+03	0.4	0.40	30.54
0.13	85.09	.114E+04	0.7	0.47	25.77
0.16	85.12	.158E+04	1.2	0.53	22.66
0.19	85.15	.206E+04	1.7	0.59	20.45
0.22	85.18	.259E+04	2.3	0.64	18.91
0.25	85.21	.321E+04	3.0	0.67	18.12
0.29	85.24	.393E+04	3.8	0.70	17.32
0.32	85.27	.473E+04	4.8	0.73	16.56
0.35	85.30	.562E+04	5.9	0.76	15.89
0.38	85.34	.663E+04	7.0	0.77	15.69
0.41	85.37	.777E+04	8.5	0.80	15.20
0.44	85.40	.902E+04	10.2	0.82	14.69
0.47	85.43	.104E+05	12.2	0.85	14.19
0.50	85.46	.118E+05	14.3	0.88	13.73
0.53	85.49	.133E+05	16.7	0.91	13.31
0.56	85.52	.150E+05	19.3	0.94	12.91

		<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (40880)	56.14	2.84	6.00	25.98	0.25	0.66
OUTFLOW: ID= 1 (60880)	56.14	1.88	6.17	25.96	0.20	0.61

ROUTEPIPE(80880)			
IN= 2---> OUT= 1	PIPE Number = 1.00		
DT= 5.0 min	Width (mm)=2400.00	Height (mm)=1900.00	
	Length (m)= 888.03		
	Slope (m/m)= 0.004		
	Manning n = 0.013		

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min
0.10	.213E+03	0.2	0.93	15.91
0.20	.426E+03	0.7	1.41	10.53
0.30	.639E+03	1.3	1.76	8.42
0.40	.853E+03	2.0	2.04	7.25
0.50	.107E+04	2.7	2.27	6.51
0.60	.128E+04	3.6	2.47	5.99
0.70	.149E+04	4.4	2.64	5.60
0.80	.171E+04	5.4	2.79	5.30
0.90	.192E+04	6.3	2.92	5.06
1.00	.213E+04	7.3	3.04	4.87
1.10	.234E+04	8.3	3.15	4.71
1.20	.256E+04	9.3	3.24	4.57
1.30	.277E+04	10.4	3.33	4.45
1.40	.298E+04	11.4	3.40	4.35
1.50	.320E+04	12.5	3.48	4.26
1.60	.341E+04	13.6	3.54	4.18
1.70	.362E+04	14.7	3.60	4.11
1.80	.384E+04	15.8	3.66	4.05
1.90	.405E+04	16.9	3.71	3.99

		<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (60880)	56.14	1.88	6.17	25.96	0.39	2.01
OUTFLOW: ID= 1 (80880)	56.14	1.77	6.25	25.96	0.37	1.95

CALIB			
STANDHYD (40890)	Area (ha)= 41.71		
ID= 1 DT= 5.0 min	Total Imp(%)= 43.73	Dir. Conn.(%)= 32.85	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.24	23.47
Dep. Storage (mm)=	2.00	8.20
Average Slope (%)=	1.10	1.10
Length (m)=	527.32	85.00
Mannings n =	0.015	0.350
Max.Eff.Inten.(mm/hr)=	63.34	15.40
over (min)	10.00	45.00
Storage Coeff. (min)=	8.81 (ii)	43.13 (ii)
Unit Hyd. Tpeak (min)=	10.00	45.00
Unit Hyd. peak (cms)=	0.12	0.03

				TOTALS
PEAK FLOW	(cms)=	1.97	0.55	2.126 (iii)
TIME TO PEAK	(hrs)=	6.00	6.67	6.00
RUNOFF VOLUME	(mm)=	46.07	15.44	25.50
TOTAL RAINFALL	(mm)=	48.07	48.07	48.07
RUNOFF COEFFICIENT	=	0.96	0.32	0.53

```
        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  75.6    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

CALIB			
STANDHYD (40900)	Area (ha)= 13.56		
ID= 1 DT= 5.0 min	Total Imp(%)= 62.00	Dir. Conn.(%)= 48.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.41	5.15
Dep. Storage (mm)=	1.00	7.00
Average Slope (%)=	1.00	2.00
Length (m)=	300.67	43.00
Mannings n =	0.015	0.310
Max.Eff.Inten.(mm/hr)=	63.34	41.70
over (min)	5.00	20.00
Storage Coeff. (min)=	6.47 (ii)	18.37 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.18	0.06

				TOTALS
PEAK FLOW	(cms)=	1.07	0.31	1.281 (iii)
TIME TO PEAK	(hrs)=	6.00	6.17	6.00
RUNOFF VOLUME	(mm)=	47.07	19.47	32.71
TOTAL RAINFALL	(mm)=	48.07	48.07	48.07
RUNOFF COEFFICIENT	=	0.98	0.40	0.68

```
        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

DUHYD (90020)				
Inlet Cap.= 0.960				
#of Inlets= 1				
Total(cms)= 1.0	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
TOTAL HYD.(ID= 1):	13.56	1.28	6.00	32.71
MAJOR SYS.(ID= 2):	0.44	0.32	6.00	32.71
MINOR SYS.(ID= 3):	13.12	0.96	5.92	32.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50890)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40890):	41.71	2.126	6.00	25.50
+ ID2= 2 (50850):	1740.73	32.499	7.08	30.59
ID = 3 (50890):	1782.44	33.060	7.08	30.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50890)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50890):	1782.44	33.060	7.08	30.47
+ ID2= 2 (80880):	56.14	1.767	6.25	25.96
ID = 1 (50890):	1838.58	34.045	7.08	30.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50890)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50890):	1838.58	34.045	7.08	30.34
+ ID2= 2 (90020):	13.12	0.960	5.92	32.71
ID = 3 (50890):	1851.70	34.179	7.08	30.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60900)			
IN= 2---> OUT= 1	Routing time step (min)'= 5.00		

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	79.05	0.0450	
2.00	78.40	0.0450	
4.00	77.75	0.0450	
6.00	77.16	0.0450	
8.00	76.78	0.0450	
10.00	76.65	0.0450	
12.00	76.60	0.0450	
14.00	76.58	0.0450	
16.00	76.08	0.0450	
18.00	75.49	0.0450 /0.0350	Main Channel
20.00	75.46	0.0350	Main Channel
22.00	75.52	0.0350 /0.0450	Main Channel
24.00	76.15	0.0450	
26.00	76.44	0.0450	
28.00	76.56	0.0450	
30.00	76.68	0.0450	
32.00	76.86	0.0450	
34.00	77.01	0.0450	
36.00	77.10	0.0450	
40.00	79.16	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.03	75.49	.127E+02	0.0	0.14	32.03
0.22	75.68	.231E+03	0.6	0.69	6.29
0.40	75.87	.510E+03	2.0	1.01	4.28
0.59	76.05	.849E+03	4.1	1.25	3.45
0.78	76.24	.125E+04	6.9	1.43	3.02
0.97	76.43	.175E+04	10.6	1.57	2.75
1.15	76.62	.240E+04	14.6	1.57	2.75
1.34	76.80	.343E+04	21.1	1.60	2.71
1.53	76.99	.465E+04	30.1	1.68	2.58
1.71	77.18	.605E+04	41.3	1.77	2.44

```
       1.90    77.36    .754E+04      55.7          1.92       2.26
       2.09    77.55    .908E+04      72.1          2.06       2.10
       2.27    77.74    .107E+05      90.6          2.20       1.96
       2.46    77.92    .123E+05     111.1          2.34       1.84
       2.65    78.11    .140E+05     133.5          2.48       1.74
       2.84    78.30    .157E+05     157.9          2.61       1.66
       3.02    78.49    .175E+05     184.1          2.73       1.58
       3.21    78.67    .193E+05     212.1          2.85       1.52
       3.40    78.86    .211E+05     242.1          2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1851.70    34.18    7.08  30.35      1.60      1.71
   OUTFLOW: ID= 1 ( 60900) 1851.70    34.11    7.08  30.35      1.59      1.71


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area     (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77         2.15
     Dep. Storage     (mm)=       2.00         7.07
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     214.73        44.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      63.34        51.02
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.51 (ii)   15.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.63         0.17          0.748 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      46.07        21.39          34.45
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.45           0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92   0.748     6.00    34.45
      + ID2= 2 ( 60900):  1851.70  34.112     7.08    30.35
        ================================================
        ID = 3 ( 50910):  1858.61  34.178     7.08    30.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.014 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.365
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.444

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.36

     Unit Hyd Qpeak  (cms)=   1.897

     PEAK FLOW       (cms)=   0.769 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  21.487
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.029 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.440
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    17.88   0.769     6.25    21.49
      + ID2= 2 (******):     0.44   0.029     6.08    21.44
        ================================================
        ID = 3 (******):    18.32   0.787     6.25    21.49

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.070

     PEAK FLOW       (cms)=   0.022 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.428
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   1.207

     PEAK FLOW       (cms)=   0.436 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.474
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.33   0.022     6.08    21.43
      + ID2= 2 (******):     7.90   0.436     6.08    21.47
        ================================================
        ID = 3 (******):     8.23   0.458     6.08    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.19   0.014     6.00    21.36
      + ID2= 2 (******):    18.32   0.787     6.25    21.49
        ================================================
        ID = 3 (******):    18.51   0.794     6.25    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    18.51   0.794     6.25    21.48
      + ID2= 2 (******):     8.23   0.458     6.08    21.47
        ================================================
        ID = 1 (******):    26.74   1.233     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       1.70         1.00
     Length            (m)=      78.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      63.34        36.19
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       2.26 (ii)    2.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.30         0.30
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.02         0.01          1.024 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      46.07        21.49          45.82
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.45           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85   1.024     6.00    45.82
      + ID2= 2 (******):     0.00   0.000     6.00    45.70
        ================================================
        ID = 3 (******):     5.85   1.024     6.00    45.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000     6.00    41.08
      + ID2= 2 (******):     0.00   0.000     6.00    45.70
        ================================================
        ID = 3 (******):     0.00   0.000     6.00    45.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.00   0.000     6.00    45.51
      + ID2= 2 (******):     5.85   1.024     6.00    45.82
        ================================================
        ID = 1 (******):     5.85   1.024     6.00    45.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         426.51        0.0450
                   0.98         426.14        0.0350      Main Channel
                   2.04         426.14        0.0350      Main Channel
                  20.51         426.51        0.0350      Main Channel

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.00   426.14    .579E+00       0.0          0.03      191.52
        0.02   426.16    .114E+02       0.0          0.14       39.52
        0.04   426.18    .285E+02       0.0          0.19       27.56
        0.06   426.20    .520E+02       0.0          0.24       22.17
        0.08   426.22    .818E+02       0.1          0.28       18.92
        0.10   426.24    .118E+03       0.1          0.32       16.68
        0.12   426.26    .161E+03       0.2          0.36       15.02
        0.14   426.27    .210E+03       0.3          0.39       13.73
        0.16   426.29    .265E+03       0.3          0.42       12.69
        0.18   426.31    .326E+03       0.5          0.45       11.82
        0.20   426.33    .394E+03       0.6          0.48       11.10
        0.22   426.35    .469E+03       0.7          0.51       10.47
        0.24   426.37    .549E+03       0.9          0.54        9.93
        0.26   426.39    .637E+03       1.1          0.56        9.46
        0.28   426.41    .730E+03       1.3          0.59        9.03
        0.30   426.43    .830E+03       1.6          0.62        8.65
        0.32   426.45    .936E+03       1.9          0.64        8.31
        0.34   426.47    .105E+04       2.2          0.67        8.01
        0.35   426.49    .117E+04       2.5          0.69        7.72

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    5.85     1.02    6.00  45.82      0.25      0.55
   OUTFLOW: ID= 1 (******)    5.85     0.85    6.00  45.65      0.23      0.52
```

```
15913>
15914>
15915> --------------------------------------------------------------------------------
15916> --------------------
15917> | ROUTEPIPE(******)|     PIPE Number     =   1.00
15918> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)= 900.00
15919> | DT=  5.0 min     |     Length       (m)= 372.00
15920> --------------------     Slope      (m/m)=  0.004
15921>                          Manning n        =  0.013
15922>
15923>      <----------------- TRAVEL TIME TABLE ---------------------->
15924>        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
15925>          (m)      (cu.m.)      (cms)        (m/s)        min
15926>         0.05     .423E+02       0.1         0.58        10.67
15927>         0.09     .846E+02       0.2         0.90         6.89
15928>         0.14     .127E+03       0.4         1.15         5.39
15929>         0.19     .169E+03       0.6         1.36         4.55
15930>         0.24     .211E+03       0.9         1.55         4.01
15931>         0.28     .254E+03       1.2         1.71         3.63
15932>         0.33     .296E+03       1.5         1.85         3.34
15933>         0.38     .338E+03       1.8         1.99         3.12
15934>         0.43     .381E+03       2.2         2.11         2.94
15935>         0.47     .423E+03       2.5         2.22         2.80
15936>         0.52     .465E+03       2.9         2.32         2.67
15937>         0.57     .507E+03       3.3         2.41         2.57
15938>         0.62     .550E+03       3.7         2.50         2.48
15939>         0.66     .592E+03       4.1         2.58         2.40
15940>         0.71     .634E+03       4.5         2.66         2.33
15941>         0.76     .677E+03       5.0         2.73         2.27
15942>         0.81     .719E+03       5.4         2.80         2.21
15943>         0.85     .761E+03       5.9         2.86         2.17
15944>         0.90     .804E+03       6.3         2.92         2.12
15945>                                      <---- hydrograph ---->   <-pipe / channel->
15946>                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
15947>                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
15948>    INFLOW : ID= 2 (******)     4.11     0.63    6.00  41.08      0.19      1.37
15949>    OUTFLOW: ID= 1 (******)     4.11     0.61    6.00  41.08      0.19      1.35
15950>
15951>
15952>
15953> --------------------------------------------------------------------------------
15954>
15955> --------------------
15956> | ADD HYD  (******)|
15957> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
15958> --------------------          (ha)    (cms)    (hrs)     (mm)
15959>         ID1= 1 (******):     4.11   0.610     6.00    41.08
15960>       + ID2= 2 (******):    26.74   1.233     6.17    21.48
15961>         ================================================
15962>         ID = 3 (******):    30.85   1.640     6.08    24.09
15963>
15964>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15965> --------------------------------------------------------------------------------
15966>
15967> --------------------
15968> | ADD HYD  (******)|
15969> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
15970> --------------------          (ha)    (cms)    (hrs)     (mm)
15971>         ID1= 3 (******):     30.85   1.640     6.08    24.09
15972>       + ID2= 2 (******):     5.85   0.850     6.00    45.65
15973>         ================================================
15974>         ID = 1 (******):     36.70   2.410     6.00    27.53
15975>
15976>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15977> --------------------------------------------------------------------------------
15978> --------------------
15979> | ROUTE CHN(******)|
15980> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
15981> --------------------
15982>                <------ DATA FOR SECTION (   1.1) ------>
15983>                Distance      Elevation       Manning
15984>                    0.00        418.26        0.0450
15985>                   40.58        417.27        0.0450
15986>                   68.64        416.80        0.0450
15987>                  140.74        415.56        0.0450
15988>                  163.74        415.03    0.0450 /0.0350  Main Channel
15989>                  211.93        413.30        0.0350      Main Channel
15990>                  250.43        411.92        0.0350      Main Channel
15991>                  258.86        411.77        0.0350      Main Channel
15992>                  276.07        411.80        0.0350      Main Channel
15993>                  290.03        411.70        0.0350      Main Channel
15994>                  294.99        411.74        0.0350      Main Channel
15995>                  298.74        411.97        0.0350      Main Channel
15996>                  309.80        412.64        0.0350      Main Channel
15997>                  321.40        413.39        0.0350      Main Channel
15998>                  332.67        415.03    0.0350 /0.0450  Main Channel
15999>                  344.47        416.63        0.0450
16000>                  360.44        418.31        0.0450
16001>                  381.73        419.43        0.0450
16002>                  385.80        419.95        0.0450
16003>                  389.30        420.75        0.0450
16004>
16005>       <---------------------- TRAVEL TIME TABLE ----------------------->
16006>         DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
16007>           (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
16008>          0.33   412.03    .115E+05      14.5         1.18       13.21
16009>          0.67   412.36    .302E+05      61.5         1.91        8.18
16010>          1.00   412.70    .535E+05     139.9         2.46        6.38
16011>          1.33   413.03    .814E+05     252.5         2.91        5.37
16012>          1.66   413.36    .114E+06     402.0         3.32        4.72
16013>          2.00   413.70    .150E+06     597.3         3.74        4.19
16014>          2.33   414.03    .190E+06     834.3         4.12        3.80
16015>          2.66   414.36    .234E+06    1114.3         4.47        3.50
16016>          2.99   414.69    .281E+06    1439.4         4.80        3.26
16017>          3.33   415.03    .332E+06    1811.8         5.12        3.06
16018>          3.69   415.39    .393E+06    2361.5         5.65        2.77
16019>          4.05   415.75    .459E+06    2978.2         6.10        2.57
16020>          4.41   416.10    .533E+06    3668.2         6.46        2.42
16021>          4.76   416.46    .615E+06    4437.5         6.78        2.31
16022>          5.12   416.82    .705E+06    5290.7         7.05        2.22
16023>          5.48   417.18    .804E+06    6232.2         7.29        2.15
16024>          5.84   417.54    .910E+06    7276.0         7.51        2.08
16025>          6.20   417.90    .102E+07    8417.1         7.74        2.02
16026>          6.56   418.26    .114E+07    9654.5         7.95        1.97
16027>
16028>                                      <---- hydrograph ---->   <-pipe / channel->
16029>                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
16030>                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
16031>    INFLOW : ID= 2 (******)     36.70     2.41    6.00  27.53      0.06      1.18
16032>    OUTFLOW: ID= 1 (******)     36.70     1.78    6.25  27.53      0.04      1.18
16033>
16034>
16035>
16036> --------------------------------------------------------------------------------
16037> --------------------
16038> | CALIB            |
16039> | NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 85.0
16040> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
16041> --------------------   U.H. Tp(hrs)=   0.55
16042>
16043>      Unit Hyd Qpeak  (cms)=   2.154
16044>
16045>      PEAK FLOW       (cms)=   0.983 (i)
16046>      TIME TO PEAK    (hrs)=   6.500
16047>      RUNOFF VOLUME    (mm)=  21.490
16048>      TOTAL RAINFALL   (mm)=  48.071
16049>      RUNOFF COEFFICIENT   =   0.447
16050>
16051>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16052>
16053> --------------------------------------------------------------------------------
16054>
16055> --------------------
16056> | ADD HYD  (******)|
16057> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
16058> --------------------          (ha)    (cms)    (hrs)     (mm)
16059>         ID1= 1 (******):     31.02   0.983     6.50    21.49
16060>       + ID2= 2 (******):     36.70   1.784     6.25    27.53
16061>         ================================================
16062>         ID = 3 (******):     67.72   2.671     6.25    24.76
16063>
16064>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
16065> --------------------------------------------------------------------------------
16066> ================================================================================
16067>
16068>        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
16069>        V    V   I    SS     U   U   A A   L
16070>         V  V    I     SS    U   U  AAAAA  L
16071>          V V    I      SS   U   U  A   A  L
16072>           VV    I    SSSSS  UUUUU  A   A  LLLLL
16073>
16074>         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
16075>        O   O    T      T    H   H   Y Y   MM MM  O   O
16076>        O   O    T      T    H   H    Y    M M M  O   O
16077>         OOO     T      T    H   H    Y    M   M   OOO
16078> Developed and Distributed by Smart City Water Inc
16079> Copyright 2007 - 2022 Smart City Water Inc
16080> All rights reserved.
16081>
16082>
16083>                  *****  D E T A I L E D   O U T P U T *****
16084>
16085>
16086>   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
16087>   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
16088>   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
16089>
16090>
16091> DATE: 02/19/2026                          TIME: 02:35:49
16092>
16093> USER:
16094>
16095>
16096>
16097> COMMENTS: _____________________________________________________
16098>
16099>
16100> --------------------------------------------------------------------------------
16101>   ***********************************************
16102>   ** SIMULATION : 25 Year 12 hr 5 min SCS Type  **
16103>   ***********************************************
16104>
16105>
16106> --------------------
16107> |    READ STORM    |    Filename: C:\Users\DPham\AppD
16108> |                  |              ata\Local\Temp\
16109> |                  |              257afcce-e1cf-4cdb-b646-cb15a9fd682a\9f1da688
16110> | Ptotal= 84.74 mm |    Comments: 25 Year 12 hr 5 min SCS Type II CC
16111> --------------------
16112>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
16113>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
16114>                   0.00    2.12 |  3.08    3.38 |  6.17   15.23 |  9.25    2.96
16115>                   0.08    2.12 |  3.17    3.38 |  6.25   15.23 |  9.33    2.96
16116>                   0.17    2.12 |  3.25    3.38 |  6.33   15.23 |  9.42    2.96
16117>                   0.25    2.12 |  3.33    3.38 |  6.42   15.23 |  9.50    2.96
16118>                   0.33    2.12 |  3.42    3.38 |  6.50    6.77 |  9.58    2.96
16119>                   0.42    2.12 |  3.50    3.38 |  6.58    6.77 |  9.67    2.96
16120>                   0.50    2.12 |  3.58    3.38 |  6.67    6.77 |  9.75    2.96
16121>                   0.58    2.12 |  3.67    3.38 |  6.75    6.77 |  9.83    2.96
16122>                   0.67    2.12 |  3.75    3.38 |  6.83    6.77 |  9.92    2.96
16123>                   0.75    2.12 |  3.83    3.38 |  6.92    6.77 | 10.00    1.69
16124>                   0.83    2.12 |  3.92    3.38 |  7.00    5.08 | 10.08    1.69
16125>                   0.92    2.12 |  4.00    5.08 |  7.08    5.08 | 10.17    1.69
16126>                   1.00    2.12 |  4.08    5.08 |  7.17    5.08 | 10.25    1.69
16127>                   1.08    2.12 |  4.17    5.08 |  7.25    5.08 | 10.33    1.69
16128>                   1.17    2.12 |  4.25    5.08 |  7.33    5.08 | 10.42    1.69
16129>                   1.25    2.12 |  4.33    5.08 |  7.42    5.08 | 10.50    1.69
16130>                   1.33    2.12 |  4.42    5.08 |  7.50    5.08 | 10.58    1.69
16131>                   1.42    2.12 |  4.50    6.77 |  7.58    5.08 | 10.67    1.69
16132>                   1.50    2.12 |  4.58    6.77 |  7.67    5.08 | 10.75    1.69
16133>                   1.58    2.12 |  4.67    6.77 |  7.75    5.08 | 10.83    1.69
16134>                   1.67    2.12 |  4.75    6.77 |  7.83    5.08 | 10.92    1.69
16135>                   1.75    2.12 |  4.83    6.77 |  7.92    5.08 | 11.00    1.69
16136>                   1.83    2.12 |  4.92    6.77 |  8.00    2.96 | 11.08    1.69
16137>                   1.92    2.12 |  5.00   10.15 |  8.08    2.96 | 11.17    1.69
16138>                   2.00    2.54 |  5.08   10.15 |  8.17    2.96 | 11.25    1.69
16139>                   2.08    2.54 |  5.17   10.15 |  8.25    2.96 | 11.33    1.69
16140>                   2.17    2.54 |  5.25   10.15 |  8.33    2.96 | 11.42    1.69
16141>                   2.25    2.54 |  5.33   10.15 |  8.42    2.96 | 11.50    1.69
16142>                   2.33    2.54 |  5.42   10.15 |  8.50    2.96 | 11.58    1.69
16143>                   2.42    2.54 |  5.50   40.60 |  8.58    2.96 | 11.67    1.69
16144>                   2.50    2.54 |  5.58   40.60 |  8.67    2.96 | 11.75    1.69
16145>                   2.58    2.54 |  5.67   40.60 |  8.75    2.96 | 11.83    1.69
16146>                   2.67    2.54 |  5.75  111.66 |  8.83    2.96 | 11.92    1.69
16147>                   2.75    2.54 |  5.83  111.66 |  8.92    2.96 | 12.00    1.69
16148>                   2.83    2.54 |  5.92  111.66 |  9.00    2.96 |
16149>                   2.92    2.54 |  6.00   15.23 |  9.08    2.96 |
16150>                   3.00    3.38 |  6.08   15.23 |  9.17    2.96 |
16151>
16152> --------------------------------------------------------------------------------
16153>
16154> --------------------
16155> | CALIB            |
16156> | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
16157> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
16158> --------------------   U.H. Tp(hrs)=   0.47
16159>
16160>      Unit Hyd Qpeak  (cms)=   3.502
16161>
16162>      PEAK FLOW       (cms)=   2.958 (i)
16163>      TIME TO PEAK    (hrs)=   6.333
16164>      RUNOFF VOLUME    (mm)=  41.075
16165>      TOTAL RAINFALL   (mm)=  84.737
16166>      RUNOFF COEFFICIENT   =   0.485
16167>
16168>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16169>
16170> --------------------------------------------------------------------------------
16171> --------------------
16172> | CALIB            |
16173> | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
16174> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
16175> --------------------   U.H. Tp(hrs)=   0.46
16176>
16177>      Unit Hyd Qpeak  (cms)=   4.557
16178>
16179>      PEAK FLOW       (cms)=   3.819 (i)
16180>      TIME TO PEAK    (hrs)=   6.333
16181>      RUNOFF VOLUME    (mm)=  40.979
16182>      TOTAL RAINFALL   (mm)=  84.737
16183>      RUNOFF COEFFICIENT   =   0.484
16184>
16185>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16186>
16187> --------------------------------------------------------------------------------
16188>
16189> --------------------
16190> | ADD HYD  ( 50010)|
16191> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
16192> --------------------          (ha)    (cms)    (hrs)     (mm)
16193>         ID1= 1 ( 40010):     43.09   2.958     6.33    41.08
16194>       + ID2= 2 ( 40030):     54.88   3.819     6.33    40.98
16195>         ================================================
16196>         ID = 3 ( 50010):     97.97   6.777     6.33    41.02
16197>
16198>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
16199> --------------------------------------------------------------------------------
16200> --------------------
16201> | ROUTE CHN( 60010)|
16202> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
16203> --------------------
16204>                <------ DATA FOR SECTION (   1.1) ------>
16205>                Distance      Elevation       Manning
16206>                    0.00        160.98        0.0450
16207>                   10.00        160.83        0.0450
16208>                   20.00        160.72        0.0450
16209>                   30.00        160.67        0.0450
16210>                   40.00        160.61        0.0450
16211>                   50.00        160.60        0.0450
16212>                   60.00        160.55        0.0450
16213>                   70.00        160.65        0.0450
16214>                   80.00        159.78        0.0450
16215>                   90.00        157.33    0.0450 /0.0350  Main Channel
16216>                  100.00        157.18        0.0350      Main Channel
16217>                  110.00        158.55        0.0450
16218>                  120.00        160.34        0.0450
```

```
                130.00        160.29        0.0450
                140.00        160.30        0.0450
                150.00        160.38        0.0450
                160.00        160.53        0.0450
                170.00        160.58        0.0450
                180.00        160.51        0.0450
                190.00        160.53        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15  157.33    .123E+04        0.4         0.43      57.39
        0.32  157.50    .422E+04        2.5         0.88      27.82
        0.49  157.67    .768E+04        6.3         1.20      20.47
        0.66  157.83    .116E+05       11.5         1.45      16.89
        0.83  158.00    .160E+05       18.2         1.67      14.70
        0.99  158.17    .209E+05       26.5         1.86      13.18
        1.16  158.34    .263E+05       36.3         2.03      12.06
        1.33  158.51    .321E+05       47.9         2.19      11.18
        1.50  158.68    .384E+05       62.7         2.40      10.21
        1.67  158.84    .451E+05       79.9         2.60       9.41
        1.84  159.01    .522E+05       99.0         2.79       8.79
        2.00  159.18    .597E+05      120.2         2.96       8.28
        2.17  159.35    .676E+05      143.3         3.11       7.86
        2.34  159.52    .759E+05      168.5         3.26       7.51
        2.51  159.69    .846E+05      195.8         3.40       7.20
        2.68  159.86    .938E+05      224.4         3.52       6.97
        2.85  160.02    .104E+06      254.6         3.61       6.78
        3.02  160.19    .114E+06      287.5         3.70       6.62
        3.18  160.36    .127E+06      315.8         3.64       6.72

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50010)   97.97     6.78    6.33  41.02      0.50      1.22
   OUTFLOW: ID= 1 ( 60010)   97.97     5.65    6.58  41.02      0.46      1.13


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40020)|   Area    (ha)=  51.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      33.87        17.45
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     584.91        50.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     111.66       103.73
                   over (min)     5.00        20.00
     Storage Coeff.  (min)=       7.10 (ii)   17.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       8.19         2.65     10.097 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17       6.00
     RUNOFF VOLUME    (mm)=      82.74        48.95      67.87
     TOTAL RAINFALL   (mm)=      84.74        84.74      84.74
     RUNOFF COEFFICIENT   =       0.98         0.58       0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50020)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40020):    51.32  10.097     6.00    67.87
      + ID2= 2 ( 60010):    97.97   5.651     6.58    41.02
        ================================================
        ID = 3 ( 50020):   149.29  11.077     6.00    50.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        153.66        0.0450
                   1.00        153.24        0.0450
                   2.00        152.95        0.0450
                   3.00        152.70        0.0450
                   4.00        152.40        0.0450
                   5.00        152.09        0.0450
                   6.00        151.83        0.0450
                   7.00        151.60        0.0450
                   8.00        151.49    0.0450 /0.0350  Main Channel
                   9.00        151.42        0.0350      Main Channel
                  10.00        151.38        0.0350      Main Channel
                  11.00        151.40        0.0350      Main Channel
                  12.00        151.38        0.0350      Main Channel
                  13.00        151.38        0.0350      Main Channel
                  14.00        151.38        0.0350      Main Channel
                  15.00        151.50    0.0350 /0.0450  Main Channel
                  16.00        151.56        0.0450
                  17.00        151.60        0.0450
                  25.00        153.59        0.0450
                  26.00        153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  151.49    .140E+03        0.2         0.36      10.54
        0.23  151.60    .355E+03        0.9         0.58       6.57
        0.34  151.72    .624E+03        2.0         0.74       5.11
        0.45  151.83    .916E+03        3.6         0.89       4.27
        0.57  151.94    .123E+04        5.5         1.02       3.73
        0.68  152.05    .157E+04        7.8         1.13       3.35
        0.79  152.17    .193E+04       10.5         1.24       3.06
        0.90  152.28    .231E+04       13.6         1.34       2.83
        1.02  152.39    .271E+04       17.1         1.43       2.65
        1.13  152.50    .314E+04       20.9         1.52       2.50
        1.24  152.62    .358E+04       25.2         1.60       2.37
        1.35  152.73    .405E+04       29.8         1.67       2.26
        1.47  152.84    .454E+04       34.9         1.75       2.17
        1.58  152.95    .505E+04       40.3         1.81       2.09
        1.69  153.07    .558E+04       46.2         1.88       2.01
        1.80  153.18    .614E+04       52.6         1.95       1.95
        1.92  153.29    .672E+04       59.4         2.01       1.88
        2.03  153.40    .731E+04       66.7         2.07       1.83
        2.14  153.52    .793E+04       74.5         2.14       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50020)  149.29    11.08    6.00  50.25      0.81      1.25
   OUTFLOW: ID= 1 ( 60020)  149.29    10.35    6.00  50.25      0.79      1.23


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--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31        18.38
     Dep. Storage     (mm)=       2.00         6.00
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     686.45        52.00

     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     111.66       131.42
                   over (min)    10.00        20.00
     Storage Coeff.  (min)=       8.01 (ii)   17.25 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.13         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=      11.08         3.56     13.665 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17       6.00
     RUNOFF VOLUME    (mm)=      82.74        52.84      70.78
     TOTAL RAINFALL   (mm)=      84.74        84.74      84.74
     RUNOFF COEFFICIENT   =       0.98         0.62       0.84

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40040):    70.68  13.665     6.00    70.78
      + ID2= 2 ( 60020):   149.29  10.351     6.00    50.25
        ================================================
        ID = 3 ( 50220):   219.97  24.016     6.00    56.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    3.4010      4.4390
                         0.0530      0.4910   |    4.8380      5.0560
                         0.0890      0.7040   |    5.8470      5.5380
                         0.2040      1.0890   |    6.5980      5.9190
                         0.3240      1.4800   |    7.2560      6.2250
                         0.3890      1.7490   |    7.9030      6.4820
                         0.4470      1.9970   |    8.4910      6.6820
                         0.5090      2.3490   |   12.0680      7.1150
                         0.7420      2.9150   |   20.0000      7.2000
                         1.7580      3.6690   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50220)    219.973     24.016      6.00      56.85
   OUTFLOW: ID= 1 ( 70010)    219.973      6.936      7.08      56.83
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 28.88
                  TIME SHIFT OF PEAK FLOW         (min)= 65.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  6.0768

--------------------------------------------------------------------------------
  --------------------------
  | Junction Command(70011) |
  --------------------------
                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70010)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70011)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   219.97   6.936     7.08    56.83
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 70012):   219.97   6.936     7.08    56.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        148.49        0.0450
                   3.00        148.12        0.0450
                   6.00        148.07        0.0450
                   9.00        147.63        0.0450
                  12.00        147.56        0.0450
                  15.00        147.55        0.0450
                  18.00        147.46        0.0450
                  21.00        147.41        0.0450
                  24.00        147.36        0.0450
                  27.00        147.38        0.0450
                  30.00        147.22        0.0450
                  33.00        147.00        0.0450
                  36.00        146.34        0.0450
                  39.00        145.57        0.0350      Main Channel
                  42.00        145.39        0.0350      Main Channel
                  45.00        145.66        0.0350      Main Channel
                  48.00        146.68        0.0450
                  51.00        147.50        0.0450
                  55.00        148.22        0.0450
                  60.00        148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  145.48    .145E+03        0.0         0.25      83.65
        0.18  145.57    .581E+03        0.2         0.40      52.70
        0.35  145.74    .189E+04        1.1         0.73      29.09
        0.52  145.91    .348E+04        2.7         0.99      21.52
        0.68  146.07    .532E+04        5.0         1.19      17.84
        0.85  146.24    .740E+04        7.9         1.36      15.60
        1.02  146.41    .973E+04       11.5         1.51      14.07
        1.19  146.58    .123E+05       15.9         1.64      12.94
        1.35  146.74    .152E+05       21.2         1.78      11.93
        1.52  146.91    .183E+05       27.8         1.94      10.99
        1.69  147.08    .218E+05       35.0         2.05      10.39
        1.86  147.25    .259E+05       43.0         2.12      10.03
        2.02  147.41    .309E+05       50.6         2.09      10.18
        2.19  147.58    .383E+05       61.5         2.05      10.37
        2.36  147.75    .474E+05       77.1         2.07      10.25
        2.52  147.91    .571E+05       95.6         2.14       9.95
        2.69  148.08    .672E+05      116.0         2.20       9.65
        2.86  148.25    .783E+05      138.1         2.25       9.45
        3.03  148.42    .904E+05      163.4         2.31       9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 70012)  219.97     6.94    7.08  56.83      0.80      1.30
   OUTFLOW: ID= 1 ( 60040)  219.97     6.75    7.33  56.83      0.78      1.29


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
```

```
                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          32.94         19.34
     Dep. Storage     (mm)=           2.00          6.30
     Average Slope     (%)=           3.30          3.30
     Length            (m)=         590.36         68.00
     Mannings n           =          0.015         0.270

     Max.Eff.Inten.(mm/hr)=         111.66        117.58
                   over (min)           5.00         15.00
     Storage Coeff.  (min)=           5.40 (ii)    13.60 (ii)
     Unit Hyd. Tpeak (min)=           5.00         15.00
     Unit Hyd. peak  (cms)=           0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=           7.62          3.89     11.056 (iii)
     TIME TO PEAK    (hrs)=           6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=          82.74         52.44       67.29
     TOTAL RAINFALL   (mm)=          84.74         84.74       84.74
     RUNOFF COEFFICIENT   =           0.98          0.62        0.79

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40050):    52.28  11.056     6.00    67.29
      + ID2= 2 ( 60040):   219.97   6.749     7.33    56.83
        ==========================================================
        ID = 3 ( 50040):   272.25  11.402     6.00    58.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        146.35        0.0450
                  16.00        145.17        0.0450
                  18.00        144.62        0.0450
                  20.00        143.50        0.0450
                  26.00        141.63        0.0350      Main Channel
                  30.00        142.17        0.0350      Main Channel
                  34.00        144.28        0.0450
                  38.00        145.27        0.0450
                  50.00        146.42        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
         0.25  141.88    .129E+03        0.2        0.54      12.17
         0.50  142.13    .516E+03        1.1        0.86       7.67
         0.74  142.38    .111E+04        3.4        1.21       5.42
         0.99  142.63    .184E+04        7.0        1.50       4.37
         1.24  142.87    .269E+04       11.9        1.75       3.76
         1.49  143.12    .366E+04       18.2        1.96       3.36
         1.74  143.37    .476E+04       25.9        2.15       3.06
         1.98  143.62    .597E+04       35.3        2.33       2.82
         2.23  143.87    .729E+04       46.5        2.52       2.61
         2.48  144.11    .869E+04       59.3        2.69       2.44
         2.73  144.36    .102E+05       74.3        2.88       2.28
         2.97  144.61    .118E+05       92.4        3.09       2.13
         3.22  144.86    .136E+05      111.6        3.24       2.03
         3.47  145.11    .156E+05      133.1        3.37       1.95
         3.72  145.35    .178E+05      152.6        3.38       1.94
         3.97  145.60    .206E+05      175.6        3.37       1.95
         4.21  145.85    .239E+05      204.3        3.37       1.95
         4.46  146.10    .279E+05      238.6        3.38       1.95
         4.71  146.35    .324E+05      279.0        3.40       1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  272.25    11.40    6.00  58.83      1.21      1.72
   OUTFLOW: ID= 1 ( 60050)  272.25    10.42    6.00  58.83      1.16      1.66
```

```
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        142.52        0.0450
                   2.00        142.41        0.0450
                   4.00        142.26        0.0450
                   6.00        142.08        0.0450
                   8.00        141.85        0.0450
                  10.00        141.61        0.0450
                  12.00        141.38        0.0450
                  14.00        141.11        0.0450
                  16.00        140.93        0.0450
                  18.00        140.83        0.0450
                  20.00        140.73        0.0350      Main Channel
                  22.00        140.55        0.0350      Main Channel
                  24.00        140.49        0.0350      Main Channel
                  26.00        140.65        0.0350      Main Channel
                  28.00        141.04        0.0450
                  30.00        141.72        0.0450
                  32.00        142.19        0.0450
                  40.00        142.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
         0.08  140.57    .466E+02        0.0        0.23      24.59
         0.15  140.65    .155E+03        0.2        0.38      14.98
         0.23  140.73    .305E+03        0.5        0.51      11.12
         0.34  140.84    .598E+03        1.2        0.68       8.29
         0.45  140.95    .995E+03        2.3        0.80       7.09
         0.56  141.06    .147E+04        3.9        0.91       6.22
         0.68  141.17    .201E+04        6.1        1.04       5.45
         0.79  141.28    .259E+04        8.8        1.16       4.89
         0.90  141.39    .321E+04       12.0        1.27       4.47
         1.01  141.50    .389E+04       15.6        1.36       4.16
         1.12  141.61    .461E+04       19.7        1.45       3.90
         1.23  141.72    .537E+04       24.3        1.54       3.69
         1.34  141.84    .619E+04       29.4        1.61       3.52
         1.45  141.95    .707E+04       35.0        1.68       3.37
         1.56  142.06    .799E+04       41.1        1.75       3.24
         1.67  142.17    .898E+04       47.8        1.81       3.13
         1.79  142.28    .101E+05       54.6        1.85       3.07
         1.90  142.39    .113E+05       62.1        1.87       3.03
         2.01  142.50    .127E+05       70.3        1.88       3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  272.25    10.42    6.00  58.83      0.84      1.21
   OUTFLOW: ID= 1 ( 60060)  272.25     9.90    6.08  58.83      0.82      1.19
```

```
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          0.94          1.90
     Dep. Storage     (mm)=          2.00          7.70
     Average Slope     (%)=          2.60          2.60
     Length            (m)=        137.56         98.00
     Mannings n           =         0.015         0.320

     Max.Eff.Inten.(mm/hr)=        111.66         85.09
                   over (min)          5.00         20.00
     Storage Coeff.  (min)=          2.42 (ii)    16.24 (ii)
     Unit Hyd. Tpeak (min)=          5.00         20.00
     Unit Hyd. peak  (cms)=          0.30          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=          0.23          0.25       0.412 (iii)
     TIME TO PEAK    (hrs)=          6.00          6.17        6.00
     RUNOFF VOLUME    (mm)=         82.74         48.68       57.63
     TOTAL RAINFALL   (mm)=         84.74         84.74       84.74
     RUNOFF COEFFICIENT   =          0.98          0.57        0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40060):     2.84    0.412     6.00    57.63
      + ID2= 2 ( 60060):   272.25    9.897     6.08    58.83
        ==========================================================
        ID = 3 ( 50070):   275.09   10.187     6.08    58.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          26.30         13.55
     Dep. Storage     (mm)=           2.00          5.60
     Average Slope     (%)=           1.40          1.40
     Length            (m)=         515.42         72.00
     Mannings n           =          0.015         0.270

     Max.Eff.Inten.(mm/hr)=         111.66        109.56
                   over (min)           5.00         20.00
     Storage Coeff.  (min)=           6.44 (ii)    17.73 (ii)
     Unit Hyd. Tpeak (min)=           5.00         20.00
     Unit Hyd. peak  (cms)=           0.18          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=           6.24          2.25       7.874 (iii)
     TIME TO PEAK    (hrs)=           6.00          6.17        6.00
     RUNOFF VOLUME    (mm)=          82.74         52.12       68.65
     TOTAL RAINFALL   (mm)=          84.74         84.74       84.74
     RUNOFF COEFFICIENT   =           0.98          0.62        0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40080):    39.85    7.874     6.00    68.65
      + ID2= 2 ( 50070):   275.09   10.187     6.08    58.82
        ==========================================================
        ID = 3 ( 50080):   314.94   17.032     6.00    60.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        141.24        0.0450
                  40.00        140.58        0.0450
                  50.00        140.57        0.0450
                  60.00        140.36        0.0450
                  70.00        140.19        0.0450
                  80.00        140.15        0.0450
                  90.00        139.70        0.0450
                 100.00        139.54        0.0350      Main Channel
                 110.00        139.97        0.0450
                 120.00        140.53        0.0450
                 130.00        140.63        0.0450
                 140.00        140.72        0.0450
                 150.00        140.87        0.0450
                 190.00        141.16        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
         0.09  139.63    .150E+03        0.1        0.18      43.53
         0.17  139.71    .598E+03        0.4        0.30      27.01
         0.26  139.80    .126E+04        1.1        0.42      19.24
         0.34  139.88    .209E+04        2.2        0.52      15.58
         0.43  139.97    .307E+04        3.8        0.60      13.36
         0.51  140.05    .420E+04        6.1        0.70      11.45
         0.60  140.14    .548E+04        9.0        0.79      10.19
         0.68  140.22    .714E+04       11.3        0.76      10.55
         0.77  140.31    .919E+04       15.7        0.82       9.77
         0.85  140.39    .115E+05       21.0        0.88       9.11
         0.94  140.48    .141E+05       27.4        0.94       8.54
         1.02  140.56    .169E+05       34.6        0.99       8.12
         1.11  140.65    .205E+05       41.1        0.97       8.32
         1.19  140.74    .248E+05       51.5        1.00       8.02
         1.28  140.82    .296E+05       64.0        1.04       7.70
         1.36  140.91    .348E+05       78.0        1.08       7.44
         1.45  140.99    .407E+05       93.6        1.11       7.24
         1.53  141.08    .472E+05      111.7        1.14       7.05
         1.62  141.16    .545E+05      132.2        1.17       6.87

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94    17.03    6.00  60.07      0.79      0.84
   OUTFLOW: ID= 1 ( 60080)  314.94    13.67    6.17  60.07      0.73      0.79
```

```
| CALIB            |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          0.99          3.46
     Dep. Storage     (mm)=          2.00          9.68
     Average Slope     (%)=          2.40          2.40
     Length            (m)=        172.19         99.00
     Mannings n           =         0.015         0.370

     Max.Eff.Inten.(mm/hr)=        111.66         57.53
                   over (min)          5.00         25.00
     Storage Coeff.  (min)=          2.84 (ii)    21.00 (ii)
     Unit Hyd. Tpeak (min)=          5.00         25.00
     Unit Hyd. peak  (cms)=          0.28          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=          0.19          0.32       0.376 (iii)
```

```
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      82.74        40.13         45.99
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.47          0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40090):     4.45   0.376     6.00    45.99
      + ID2= 2 ( 60080):   314.94  13.667     6.17    60.07
        ==================================================
        ID = 3 ( 50090):   319.39  13.996     6.17    59.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        138.71        0.0450
                   4.00        136.97        0.0450
                  28.00        135.94        0.0450
                  32.00        135.79        0.0350      Main Channel
                  36.00        135.23        0.0350      Main Channel
                  40.00        135.71    0.0350 /0.0450  Main Channel
                  54.00        136.96        0.0450
                  80.00        138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16  135.39    .631E+02       0.1         0.44       12.42
        0.31  135.55    .253E+03       0.5         0.69        7.83
        0.47  135.71    .568E+03       1.6         0.91        5.97
        0.65  135.89    .114E+04       4.2         1.20        4.52
        0.84  136.07    .209E+04       8.7         1.35        4.02
        1.02  136.25    .342E+04      15.4         1.47        3.70
        1.20  136.44    .511E+04      24.8         1.58        3.44
        1.38  136.62    .718E+04      37.2         1.69        3.21
        1.57  136.80    .962E+04      53.1         1.79        3.02
        1.75  136.98    .124E+05      72.7         1.90        2.85
        1.93  137.17    .155E+05      97.8         2.05        2.64
        2.11  137.35    .188E+05     127.1         2.20        2.47
        2.30  137.53    .223E+05     160.4         2.34        2.31
        2.48  137.71    .259E+05     197.8         2.48        2.19
        2.66  137.90    .298E+05     239.5         2.61        2.07
        2.85  138.08    .339E+05     285.4         2.74        1.98
        3.03  138.26    .381E+05     335.6         2.86        1.89
        3.21  138.44    .426E+05     390.3         2.98        1.82
        3.39  138.63    .472E+05     449.4         3.10        1.75

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  319.39    14.00    6.17  59.87      0.98      1.44
   OUTFLOW: ID= 1 ( 60100)  319.39    13.64    6.17  59.87      0.97      1.43


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.46         14.44
     Dep. Storage     (mm)=       2.00          6.20
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     423.45        125.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     111.66         67.86
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       5.72 (ii)    25.17 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.20          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.37          1.42          4.115 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33           6.00
     RUNOFF VOLUME    (mm)=      82.74         48.95          63.28
     TOTAL RAINFALL   (mm)=      84.74         84.74          84.74
     RUNOFF COEFFICIENT   =       0.98          0.58           0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40100):    26.90   4.115     6.00    63.28
      + ID2= 2 ( 60100):   319.39  13.636     6.17    59.87
        ==================================================
        ID = 3 ( 50110):   346.28  15.790     6.17    60.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

     Unit Hyd Qpeak  (cms)=   3.961

     PEAK FLOW       (cms)=   3.434 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  43.099
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.509

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

     Unit Hyd Qpeak  (cms)=   4.875

     PEAK FLOW       (cms)=   4.705 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  45.714
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.539

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   3.434     6.33    43.10
      + ID2= 2 ( 40130):    63.82   4.705     6.42    45.71
        ==================================================
        ID = 3 ( 50130):   108.42   8.120     6.33    44.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.27        0.0450
                   2.00        155.23        0.0450
                   4.00        155.21        0.0450
                   6.00        155.08        0.0450
                   8.00        154.94        0.0450
                  10.00        154.68        0.0450
                  12.00        154.21        0.0450
                  14.00        153.90        0.0450
                  16.00        153.41        0.0350      Main Channel
                  18.00        153.58        0.0350      Main Channel
                  20.00        153.72    0.0350 /0.0450  Main Channel
                  22.00        153.77        0.0450
                  24.00        153.77        0.0450
                  26.00        153.82        0.0450
                  28.00        153.79        0.0450
                  30.00        153.87        0.0450
                  32.00        153.99        0.0450
                  34.00        154.44        0.0450
                  36.00        154.86        0.0450
                  40.00        155.37        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  153.50    .107E+03       0.0         0.27       87.23
        0.20  153.60    .429E+03       0.1         0.42       55.65
        0.29  153.70    .991E+03       0.4         0.55       42.98
        0.39  153.80    .201E+04       0.9         0.66       35.52
        0.49  153.90    .408E+04       2.1         0.71       33.15
        0.59  153.99    .651E+04       3.7         0.81       29.01
        0.69  154.09    .916E+04       6.1         0.93       25.22
        0.79  154.19    .120E+05       8.9         1.05       22.39
        0.88  154.29    .149E+05      12.3         1.16       20.20
        0.98  154.39    .179E+05      16.2         1.27       18.49
        1.08  154.49    .211E+05      20.5         1.37       17.13
        1.18  154.58    .244E+05      25.4         1.47       16.02
        1.28  154.68    .278E+05      30.7         1.56       15.10
        1.37  154.78    .314E+05      36.4         1.63       14.38
        1.47  154.88    .351E+05      42.5         1.71       13.77
        1.57  154.98    .391E+05      48.9         1.76       13.33
        1.67  155.07    .433E+05      55.6         1.81       12.98
        1.77  155.17    .478E+05      63.0         1.86       12.65
        1.86  155.27    .528E+05      69.8         1.86       12.62

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42     8.12    6.33  44.64      0.76      1.01
   OUTFLOW: ID= 1 ( 60130)  108.42     6.40    6.67  44.63      0.70      0.94


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      46.69         19.07
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     662.12         66.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     111.66        102.88
                   over (min)      10.00         20.00
     Storage Coeff.  (min)=       7.65 (ii)    19.38 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.13          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=      10.61          2.85          12.637 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      82.74         49.08          69.61
     TOTAL RAINFALL   (mm)=      84.74         84.74          84.74
     RUNOFF COEFFICIENT   =       0.98          0.58           0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76  12.637     6.00    69.61
      + ID2= 2 ( 60130):   108.42   6.395     6.67    44.63
        ==================================================
        ID = 3 ( 50180):   174.18  14.125     6.08    54.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.55          3.33
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       1.00          1.00
     Length            (m)=     304.26         66.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     111.66         80.63
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       5.19 (ii)    19.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.21          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.03          0.38           3.299 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      82.74         45.63          72.72
     TOTAL RAINFALL   (mm)=      84.74         84.74          84.74
     RUNOFF COEFFICIENT   =       0.98          0.54           0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                              IMPERVIOUS    PERVIOUS (i)
```

```
      Surface Area     (ha)=       5.74         8.05
      Dep. Storage     (mm)=       2.00         8.12
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     303.13       131.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=     111.66        47.28
                    over (min)       5.00        30.00
      Storage Coeff.  (min)=       3.98 (ii)   26.47 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.24         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.63         0.62          1.936 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      82.74        40.68         56.93
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.48          0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         155.90        0.0450
                   1.00         154.69        0.0450
                   2.00         154.30        0.0450
                   3.00         154.00    0.0450 /0.0350  Main Channel
                   4.00         153.74        0.0350      Main Channel
                   5.00         153.51        0.0350      Main Channel
                   6.00         153.46        0.0350      Main Channel
                   7.00         153.77        0.0350      Main Channel
                   8.00         154.10    0.0350 /0.0450  Main Channel
                   9.00         154.50        0.0450
                  10.00         154.84        0.0450
                  11.00         155.13        0.0450
                  12.00         155.26        0.0450
                  13.00         155.32        0.0450
                  14.00         155.42        0.0450
                  15.00         155.52        0.0450
                  16.00         155.62        0.0450
                  17.00         155.69        0.0450
                  18.00         155.76        0.0450
                  20.00         155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   153.57    .445E+02       0.0         0.32       21.18
        0.22   153.68    .135E+03       0.2         0.51       13.45
        0.33   153.79    .262E+03       0.4         0.66       10.46
        0.43   153.89    .423E+03       0.8         0.79        8.73
        0.54   154.00    .616E+03       1.3         0.90        7.61
        0.68   154.14    .900E+03       2.4         1.09        6.30
        0.81   154.27    .123E+04       3.8         1.27        5.40
        0.95   154.41    .160E+04       5.5         1.42        4.83
        1.08   154.54    .201E+04       7.6         1.55        4.43
        1.22   154.68    .246E+04       9.9         1.67        4.12
        1.35   154.81    .294E+04      12.7         1.78        3.86
        1.48   154.94    .345E+04      15.8         1.88        3.65
        1.62   155.08    .400E+04      19.2         1.97        3.48
        1.75   155.21    .458E+04      22.9         2.05        3.34
        1.89   155.35    .524E+04      26.8         2.11        3.26
        2.02   155.48    .599E+04      31.4         2.16        3.18
        2.16   155.62    .682E+04      36.5         2.20        3.12
        2.29   155.75    .774E+04      41.9         2.23        3.08
        2.43   155.89    .878E+04      48.0         2.25        3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     1.94    6.00  56.93      0.62      1.00
   OUTFLOW: ID= 1 ( 60190)   13.78     1.65    6.00  56.93      0.58      0.95


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--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      17.41         5.53
      Dep. Storage     (mm)=       2.00         6.75
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     391.08       150.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     111.66        58.47
                    over (min)       5.00        25.00
      Storage Coeff.  (min)=       4.34 (ii)   23.06 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.23         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.21         0.50          5.508 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      82.74        43.39         72.80
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.51          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40180):    13.89    3.299     6.00    72.72
     + ID2= 2 ( 40200):    22.94    5.508     6.00    72.80
       ==================================================
       ID = 3 ( 50200):    36.83    8.807     6.00    72.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 3 ( 50200):    36.83    8.807     6.00    72.77
     + ID2= 2 ( 60190):    13.78    1.651     6.00    56.93
       ==================================================
       ID = 1 ( 50200):    50.61   10.458     6.00    68.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.01         1.06
      Dep. Storage     (mm)=       2.00         6.27
      Average Slope     (%)=       0.90         0.90
      Length            (m)=     201.21       118.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     111.66        49.71
                    over (min)       5.00        30.00
      Storage Coeff.  (min)=       4.18 (ii)   28.99 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.24         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.51         0.08          1.555 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      82.74        43.19         75.52
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.51          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40210):     6.07    1.555     6.00    75.52
     + ID2= 2 ( 50200):    50.61   10.458     6.00    68.46
       ==================================================
       ID = 3 ( 50210):    56.68   12.012     6.00    69.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.62        0.0450
                   7.00         152.39        0.0450
                   8.00         152.02        0.0450
                   9.00         151.48        0.0450
                  10.00         151.01        0.0450
                  11.00         150.56    0.0450 /0.0350  Main Channel
                  12.00         150.38        0.0350      Main Channel
                  13.00         150.40        0.0350      Main Channel
                  14.00         150.36        0.0350      Main Channel
                  15.00         150.60    0.0350 /0.0450  Main Channel
                  16.00         150.99        0.0450
                  17.00         151.50        0.0450
                  18.00         151.91        0.0450
                  19.00         152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   150.46    .580E+02       0.1         0.30       17.06
        0.20   150.56    .160E+03       0.3         0.48       10.57
        0.32   150.68    .314E+03       0.7         0.70        7.18
        0.44   150.80    .489E+03       1.4         0.89        5.71
        0.56   150.92    .686E+03       2.3         1.03        4.89
        0.69   151.04    .904E+03       3.5         1.16        4.35
        0.81   151.16    .114E+04       4.8         1.28        3.95
        0.93   151.29    .140E+04       6.4         1.38        3.66
        1.05   151.41    .167E+04       8.1         1.48        3.42
        1.17   151.53    .196E+04      10.1         1.57        3.22
        1.29   151.65    .227E+04      12.3         1.65        3.06
        1.41   151.77    .260E+04      14.8         1.73        2.93
        1.54   151.89    .295E+04      17.5         1.80        2.81
        1.66   152.01    .331E+04      20.4         1.87        2.70
        1.78   152.13    .369E+04      23.6         1.94        2.61
        1.90   152.26    .409E+04      27.0         2.00        2.52
        2.02   152.38    .451E+04      30.7         2.06        2.45
        2.14   152.50    .500E+04      33.4         2.03        2.49
        2.26   152.62    .563E+04      37.3         2.01        2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50210)   56.68    12.01    6.00  69.21      1.27      1.64
   OUTFLOW: ID= 1 ( 60210)   56.68    11.53    6.00  69.21      1.25      1.62


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.91         2.40
      Dep. Storage     (mm)=       2.00         6.17
      Average Slope     (%)=       0.60         0.60
      Length            (m)=     274.66        79.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     111.66        50.95
                    over (min)       5.00        30.00
      Storage Coeff.  (min)=       5.69 (ii)   27.50 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.20         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.60         0.20          2.701 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      82.74        43.98         74.12
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.52          0.87

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40220):    11.32    2.701     6.00    74.12
     + ID2= 2 ( 60210):    56.68   11.532     6.00    69.21
       ==================================================
       ID = 3 ( 50120):    68.00   14.233     6.00    70.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 50120):    68.00   14.233     6.00    70.03
     + ID2= 2 ( 50180):   174.18   14.125     6.08    54.06
       ==================================================
       ID = 3 ( 50140):   242.18   28.289     6.00    58.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.29        0.0450
                   2.00         152.20        0.0450
                   4.00         152.17        0.0450
```

	6.00	152.15	0.0450	
	8.00	151.78	0.0450	
	10.00	151.28	0.0450	
	12.00	150.79	0.0450	
	14.00	150.20	0.0450 /0.0350	Main Channel
	16.00	149.82	0.0350	Main Channel
	18.00	149.51	0.0350	Main Channel
	20.00	149.24	0.0350	Main Channel
	22.00	149.48	0.0350	Main Channel
	24.00	150.00	0.0350 /0.0450	Main Channel
	26.00	150.52	0.0450	
	28.00	151.14	0.0450	
	30.00	151.68	0.0450	
	32.00	152.11	0.0450	
	34.00	152.20	0.0450	
	35.00	152.27	0.0450	
	38.00	152.30	0.0450	

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.15	149.39	.694E+02	0.1	0.32	19.63
0.31	149.54	.273E+03	0.4	0.53	11.92
0.46	149.70	.577E+03	1.1	0.72	8.87
0.61	149.85	.972E+03	2.2	0.87	7.30
0.76	150.00	.145E+04	3.9	1.01	6.26
0.93	150.16	.205E+04	6.4	1.18	5.36
1.09	150.33	.274E+04	9.9	1.37	4.62
1.25	150.49	.350E+04	14.2	1.54	4.11
1.42	150.65	.434E+04	19.3	1.69	3.75
1.58	150.82	.524E+04	25.2	1.83	3.47
1.74	150.98	.621E+04	31.8	1.95	3.26
1.91	151.14	.726E+04	39.2	2.06	3.09
2.07	151.31	.839E+04	47.5	2.16	2.94
2.23	151.47	.959E+04	56.6	2.25	2.82
2.40	151.63	.109E+05	66.7	2.34	2.72
2.56	151.80	.122E+05	77.6	2.41	2.63
2.72	151.96	.137E+05	89.3	2.48	2.55
2.89	152.12	.153E+05	102.0	2.55	2.49
3.05	152.29	.172E+05	111.6	2.47	2.57

	AREA (ha)	<---- hydrograph ----> QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50140)	242.18	28.29	6.00	58.55	1.66	1.88
OUTFLOW: ID= 1 (60140)	242.18	26.32	6.08	58.55	1.60	1.85

ROUTE CHN(60150)|
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	151.02	0.0450	
2.00	150.89	0.0450	
4.00	150.73	0.0450	
6.00	150.65	0.0450	
8.00	150.38	0.0450	
10.00	149.93	0.0450	
12.00	149.51	0.0450	
14.00	149.02	0.0450 /0.0350	Main Channel
16.00	148.64	0.0350	Main Channel
18.00	148.27	0.0350	Main Channel
20.00	148.39	0.0350	Main Channel
22.00	148.60	0.0350	Main Channel
24.00	148.94	0.0350 /0.0450	Main Channel
26.00	149.34	0.0450	
28.00	149.66	0.0450	
30.00	150.12	0.0450	
32.00	150.45	0.0450	
34.00	150.52	0.0450	
36.00	150.60	0.0450	
38.00	150.60	0.0450	

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	148.38	.283E+02	0.0	0.26	13.34
0.22	148.49	.107E+03	0.2	0.44	7.98
0.34	148.60	.226E+03	0.6	0.58	6.07
0.45	148.72	.380E+03	1.3	0.72	4.90
0.56	148.83	.563E+03	2.2	0.84	4.20
0.67	148.94	.775E+03	3.5	0.95	3.72
0.80	149.07	.105E+04	5.5	1.11	3.17
0.93	149.20	.136E+04	8.2	1.27	2.77
1.06	149.32	.170E+04	11.3	1.41	2.50
1.18	149.45	.207E+04	14.9	1.52	2.31
1.31	149.58	.248E+04	19.1	1.63	2.17
1.44	149.71	.292E+04	23.8	1.72	2.05
1.57	149.83	.340E+04	29.1	1.81	1.95
1.70	149.96	.391E+04	34.9	1.89	1.87
1.82	150.09	.445E+04	41.4	1.97	1.79
1.95	150.22	.502E+04	48.4	2.04	1.73
2.08	150.35	.563E+04	56.0	2.10	1.67
2.21	150.47	.628E+04	63.9	2.15	1.64
2.33	150.60	.702E+04	71.1	2.14	1.64

	AREA (ha)	<---- hydrograph ----> QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (60140)	242.18	26.32	6.08	58.55	1.50	1.76
OUTFLOW: ID= 1 (60150)	242.18	26.70	6.08	58.55	1.51	1.77

CALIB	
STANDHYD (40150)		Area (ha)= 5.37	
ID= 1 DT= 5.0 min		Total Imp(%)= 57.84	Dir. Conn.(%)= 52.13

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	3.11	2.26	
Dep. Storage	(mm)=	2.00	6.34	
Average Slope	(%)=	2.30	2.30	
Length	(m)=	189.18	45.00	
Mannings n	=	0.015	0.290	
Max.Eff.Inten.	(mm/hr)=	111.66	86.95	
over	(min)	5.00	15.00	
Storage Coeff.	(min)=	3.04 (ii)	11.44 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	15.00	
Unit Hyd. peak	(cms)=	0.27	0.09	
				TOTALS
PEAK FLOW	(cms)=	0.86	0.35	1.177 (iii)
TIME TO PEAK	(hrs)=	6.00	6.08	6.00
RUNOFF VOLUME	(mm)=	82.74	46.36	65.32
TOTAL RAINFALL	(mm)=	84.74	84.74	84.74
RUNOFF COEFFICIENT	=	0.98	0.55	0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50160)					
1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40150):		5.37	1.177	6.00	65.32
+ ID2= 2 (60150):		242.18	26.702	6.08	58.55
ID = 3 (50160):		247.54	27.319	6.08	58.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (40240)		Area (ha)= 10.28	
ID= 1 DT= 5.0 min		Total Imp(%)= 85.45	Dir. Conn.(%)= 84.88

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	8.79	1.50	
Dep. Storage	(mm)=	2.00	5.70	
Average Slope	(%)=	3.40	3.40	
Length	(m)=	261.85	70.00	
Mannings n	=	0.015	0.270	
Max.Eff.Inten.	(mm/hr)=	111.66	76.00	
over	(min)	5.00	10.00	
Storage Coeff.	(min)=	3.29 (ii)	7.45 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	10.00	
Unit Hyd. peak	(cms)=	0.27	0.13	
				TOTALS
PEAK FLOW	(cms)=	2.69	0.25	2.941 (iii)
TIME TO PEAK	(hrs)=	6.00	6.00	6.00
RUNOFF VOLUME	(mm)=	82.74	44.25	76.92
TOTAL RAINFALL	(mm)=	84.74	84.74	84.74
RUNOFF COEFFICIENT	=	0.98	0.52	0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (40250)		Area (ha)= 13.36	
ID= 1 DT= 5.0 min		Total Imp(%)= 64.44	Dir. Conn.(%)= 62.89

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	8.61	4.75	
Dep. Storage	(mm)=	2.00	7.14	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	298.43	70.00	
Mannings n	=	0.015	0.320	
Max.Eff.Inten.	(mm/hr)=	111.66	69.17	
over	(min)	5.00	20.00	
Storage Coeff.	(min)=	4.17 (ii)	17.44 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	20.00	
Unit Hyd. peak	(cms)=	0.24	0.06	
				TOTALS
PEAK FLOW	(cms)=	2.56	0.49	2.906 (iii)
TIME TO PEAK	(hrs)=	6.00	6.17	6.00
RUNOFF VOLUME	(mm)=	82.74	42.19	67.69
TOTAL RAINFALL	(mm)=	84.74	84.74	84.74
RUNOFF COEFFICIENT	=	0.98	0.50	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(60240)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	155.56	0.0450	
2.00	155.23	0.0450	
4.00	154.58	0.0450	
6.00	153.92	0.0450	
8.00	153.53	0.0450	
10.00	152.64	0.0450	
12.00	152.43	0.0450 /0.0350	Main Channel
14.00	152.24	0.0350	Main Channel
16.00	152.07	0.0350	Main Channel
18.00	152.30	0.0350 /0.0450	Main Channel
20.00	152.46	0.0450	
22.00	155.55	0.0450	

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	152.18	.895E+02	0.1	0.43	24.33
0.24	152.30	.356E+03	0.4	0.69	15.20
0.43	152.49	.118E+04	2.1	1.10	9.55
0.62	152.68	.234E+04	5.5	1.48	7.09
0.81	152.88	.361E+04	10.4	1.83	5.76
1.00	153.07	.494E+04	16.7	2.13	4.94
1.19	153.26	.634E+04	24.2	2.40	4.38
1.38	153.45	.781E+04	32.8	2.65	3.97
1.58	153.64	.936E+04	42.5	2.86	3.67
1.77	153.83	.110E+05	53.3	3.05	3.45
1.96	154.02	.128E+05	65.6	3.23	3.26
2.15	154.21	.147E+05	79.4	3.40	3.09
2.34	154.40	.167E+05	94.5	3.57	2.95
2.53	154.60	.188E+05	111.0	3.73	2.82
2.72	154.79	.209E+05	128.7	3.89	2.71
2.91	154.98	.231E+05	147.8	4.03	2.61
3.10	155.17	.255E+05	168.3	4.17	2.52
3.30	155.36	.279E+05	189.2	4.28	2.46
3.49	155.55	.305E+05	211.3	4.38	2.40

	AREA (ha)	<---- hydrograph ----> QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (40250)	13.36	2.91	6.00	67.69	0.48	1.18
OUTFLOW: ID= 1 (60240)	13.36	2.35	6.00	67.68	0.44	1.13

ADD HYD (50250)					
1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40240):		10.28	2.941	6.00	76.92
+ ID2= 2 (50160):		247.54	27.319	6.08	58.69
ID = 3 (50250):		257.83	28.429	6.08	59.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50250)					
3 + 2 = 1		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50250):		257.83	28.429	6.08	59.42
+ ID2= 2 (60240):		13.36	2.348	6.00	67.68
ID = 1 (50250):		271.19	30.648	6.00	59.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60250)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	149.47	0.0450	
3.00	149.39	0.0450	
6.00	149.18	0.0450	
9.00	148.85	0.0450	
12.00	148.60	0.0450	

```
                 15.00        148.16        0.0450
                 18.00        147.81        0.0450
                 21.00        147.50        0.0450
                 24.00        147.26        0.0350      Main Channel
                 27.00        146.88        0.0350      Main Channel
                 30.00        146.72        0.0350      Main Channel
                 33.00        147.27    0.0350 /0.0450  Main Channel
                 36.00        147.60        0.0450
                 39.00        147.71        0.0450
                 42.00        148.10        0.0450
                 45.00        148.90        0.0450
                 48.00        149.05        0.0450
                 51.00        149.12        0.0450
                 54.00        149.43        0.0450
                 57.00        149.67        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.14   146.85    .156E+03        0.1         0.30      40.24
        0.27   146.99    .583E+03        0.4         0.51      23.51
        0.41   147.13    .119E+04        1.1         0.68      17.78
        0.54   147.26    .198E+04        2.2         0.82      14.76
        0.69   147.41    .309E+04        4.3         1.02      11.88
        0.84   147.56    .455E+04        7.2         1.15      10.50
        0.98   147.70    .637E+04       10.9         1.24       9.73
        1.13   147.85    .862E+04       15.8         1.32       9.12
        1.28   148.00    .111E+05       21.7         1.41       8.55
        1.42   148.14    .139E+05       28.7         1.50       8.06
        1.57   148.29    .169E+05       37.1         1.59       7.58
        1.72   148.44    .200E+05       46.5         1.68       7.16
        1.87   148.58    .233E+05       57.0         1.77       6.80
        2.01   148.73    .268E+05       68.3         1.85       6.53
        2.16   148.88    .305E+05       80.9         1.92       6.28
        2.31   149.02    .345E+05       93.2         1.95       6.17
        2.45   149.17    .391E+05      106.6         1.97       6.11
        2.60   149.32    .441E+05      123.2         2.02       5.97
        2.75   149.47    .495E+05      139.7         2.04       5.91

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    30.65    6.00  59.83      1.46      1.52
   OUTFLOW: ID= 1 ( 60250)  271.19    26.71    6.17  59.83      1.38      1.47



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       15.93         12.52
     Dep. Storage     (mm)=        2.00          6.70
     Average Slope     (%)=        1.30          1.30
     Length            (m)=      435.49         46.00
     Mannings n             =     0.015         0.300

     Max.Eff.Inten.(mm/hr)=      111.66        101.73
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=        5.95 (ii)    15.63 (ii)
     Unit Hyd. Tpeak (min)=        5.00         20.00
     Unit Hyd. peak  (cms)=        0.19          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.59          1.93          4.979 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=       82.74         47.75          62.80
     TOTAL RAINFALL   (mm)=       84.74         84.74          84.74
     RUNOFF COEFFICIENT   =        0.98          0.56           0.74

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40260):    28.45    4.979     6.00    62.80
      + ID2= 2 ( 60250):   271.19   26.713     6.17    59.83
        ==================================================
        ID = 3 ( 50260):   299.64   29.730     6.17    60.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        143.17        0.0450
                  4.00        143.15        0.0450
                  8.00        143.14        0.0450
                 12.00        142.95        0.0450
                 16.00        142.87        0.0450
                 20.00        142.67        0.0450
                 24.00        142.24        0.0450
                 28.00        141.84        0.0450
                 32.00        141.61        0.0450
                 36.00        141.32        0.0450
                 40.00        140.98        0.0450
                 44.00        140.88        0.0450
                 48.00        139.95        0.0350      Main Channel
                 52.00        140.09        0.0350      Main Channel
                 56.00        141.11        0.0450
                 60.00        141.43        0.0450
                 76.00        143.21        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.17   140.12    .479E+03        0.2         0.48      36.89
        0.34   140.29    .147E+04        1.2         0.86      20.63
        0.51   140.46    .272E+04        2.9         1.12      15.78
        0.68   140.63    .421E+04        5.3         1.33      13.28
        0.85   140.80    .596E+04        8.5         1.51      11.69
        1.02   140.97    .812E+04       12.0         1.56      11.29
        1.19   141.14    .111E+05       17.6         1.68      10.52
        1.36   141.31    .147E+05       25.4         1.83       9.67
        1.53   141.48    .191E+05       34.9         1.93       9.14
        1.70   141.65    .242E+05       46.4         2.03       8.71
        1.87   141.81    .301E+05       59.9         2.11       8.38
        2.04   141.98    .367E+05       76.6         2.21       7.99
        2.21   142.15    .439E+05       95.9         2.31       7.63
        2.37   142.32    .517E+05      117.9         2.42       7.30
        2.54   142.49    .600E+05      142.7         2.52       7.01
        2.71   142.66    .689E+05      170.3         2.62       6.74
        2.88   142.83    .785E+05      198.2         2.68       6.60
        3.05   143.00    .892E+05      225.9         2.68       6.58
        3.22   143.17    .101E+06      250.7         2.63       6.73

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50260)  299.64    29.73    6.17  60.11      1.43      1.87
   OUTFLOW: ID= 1 ( 60260)  299.64    26.54    6.25  60.11      1.38      1.84



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        3.12          6.71
     Dep. Storage     (mm)=        2.00          8.03
     Average Slope     (%)=        1.10          1.10
     Length            (m)=      256.01         73.00
     Mannings n             =     0.015         0.330

     Max.Eff.Inten.(mm/hr)=      111.66        68.38
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=        4.55 (ii)   21.21 (ii)
     Unit Hyd. Tpeak (min)=        5.00        25.00
     Unit Hyd. peak  (cms)=        0.23         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.66         0.74          1.100 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=       82.74        46.10          54.17
     TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
     RUNOFF COEFFICIENT   =        0.98         0.54           0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40270):     9.83    1.100     6.00    54.17
      + ID2= 2 ( 60260):   299.64   26.538     6.25    60.11
        ==================================================
        ID = 3 ( 50270):   309.47   27.392     6.25    59.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       20.16         11.14
     Dep. Storage     (mm)=        2.00          7.27
     Average Slope     (%)=        1.10          1.10
     Length            (m)=      456.83         53.00
     Mannings n             =     0.015         0.310

     Max.Eff.Inten.(mm/hr)=      111.66        98.38
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=        6.44 (ii)   17.89 (ii)
     Unit Hyd. Tpeak (min)=        5.00        20.00
     Unit Hyd. peak  (cms)=        0.18         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=        4.69         1.64          5.858 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=       82.74        46.35          65.15
     TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
     RUNOFF COEFFICIENT   =        0.98         0.55           0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40280):    31.30    5.858     6.00    65.15
      + ID2= 2 ( 50270):   309.47   27.392     6.25    59.92
        ==================================================
        ID = 3 ( 50280):   340.77   30.048     6.25    60.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        139.35        0.0450
                  3.00        139.19        0.0450
                  6.00        138.46        0.0450
                 27.00        137.71        0.0450
                 30.00        137.44        0.0350      Main Channel
                 33.00        137.26        0.0350      Main Channel
                 36.00        137.51        0.0350      Main Channel
                 39.00        137.64    0.0350 /0.0450  Main Channel
                 42.00        137.71        0.0450
                 57.00        139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.09   137.35    .361E+02        0.0         0.30      17.09
        0.18   137.44    .145E+03        0.2         0.48      10.76
        0.30   137.55    .369E+03        0.8         0.68       7.57
        0.41   137.67    .717E+03        1.9         0.82       6.28
        0.52   137.78    .124E+04        3.9         0.97       5.27
        0.63   137.89    .192E+04        6.8         1.10       4.67
        0.74   138.00    .273E+04       10.7         1.20       4.25
        0.86   138.11    .369E+04       15.7         1.30       3.93
        0.97   138.23    .480E+04       21.8         1.39       3.67
        1.08   138.34    .605E+04       29.1         1.48       3.46
        1.19   138.45    .745E+04       37.8         1.56       3.28
        1.31   138.56    .895E+04       48.6         1.67       3.07
        1.42   138.68    .105E+05       60.8         1.78       2.88
        1.53   138.79    .121E+05       74.4         1.89       2.71
        1.64   138.90    .138E+05       89.3         1.99       2.57
        1.76   139.01    .155E+05      105.5         2.10       2.44
        1.87   139.13    .172E+05      123.0         2.19       2.33
        1.98   139.24    .190E+05      140.8         2.27       2.25
        2.09   139.35    .209E+05      159.0         2.33       2.20

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    30.05    6.25  60.40      1.09      1.49
   OUTFLOW: ID= 1 ( 60280)  340.77    29.54    6.25  60.40      1.09      1.48



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--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        6.71          4.81
     Dep. Storage     (mm)=        2.00          7.99
     Average Slope     (%)=        1.60          1.60
     Length            (m)=      277.19         63.00
     Mannings n             =     0.015         0.340

     Max.Eff.Inten.(mm/hr)=      111.66        92.52
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=        4.26 (ii)   16.56 (ii)
     Unit Hyd. Tpeak (min)=        5.00        20.00
     Unit Hyd. peak  (cms)=        0.23         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.58         0.69          2.064 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.17           6.00
```

```
      RUNOFF VOLUME    (mm)=      82.74        44.74          61.83
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.53           0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.3    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40300):    11.53    2.064     6.00    61.83
      + ID2= 2 ( 60280):   340.77   29.538     6.25    60.40
        ================================================
        ID = 3 ( 50300):   352.30   30.455     6.25    60.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        137.26        0.0450
                   4.00        136.94        0.0450
                   8.00        136.82        0.0450
                  12.00        136.69        0.0450
                  16.00        136.55        0.0450
                  36.00        135.52        0.0350      Main Channel
                  64.00        136.21        0.0450
                  75.00        136.49        0.0450
                  84.00        137.21        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   135.61    .491E+02        0.1         0.26       12.99
        0.18   135.70    .196E+03        0.4         0.42        8.18
        0.27   135.79    .442E+03        1.2         0.55        6.24
        0.36   135.88    .785E+03        2.5         0.66        5.15
        0.45   135.97    .123E+04        4.6         0.77        4.44
        0.53   136.06    .177E+04        7.5         0.87        3.93
        0.62   136.15    .240E+04       11.3         0.96        3.55
        0.71   136.24    .314E+04       16.4         1.07        3.19
        0.80   136.32    .397E+04       23.3         1.20        2.84
        0.89   136.41    .490E+04       31.4         1.32        2.60
        0.98   136.50    .592E+04       40.8         1.42        2.41
        1.07   136.59    .701E+04       51.5         1.51        2.27
        1.16   136.68    .816E+04       63.4         1.59        2.14
        1.25   136.77    .938E+04       76.6         1.67        2.04
        1.34   136.86    .107E+05       91.2         1.75        1.95
        1.42   136.95    .120E+05      107.3         1.83        1.87
        1.51   137.04    .135E+05      125.8         1.91        1.78
        1.60   137.13    .149E+05      145.6         2.00        1.71
        1.69   137.22    .164E+05      166.8         2.08        1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30    30.46    6.25  60.45      0.88       1.30
   OUTFLOW: ID= 1 ( 60300)  352.30    30.40    6.33  60.45      0.88       1.30


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--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77         6.39
     Dep. Storage     (mm)=       2.00         8.38
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     247.21        43.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     111.66        80.71
                 over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.23 (ii)   11.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.27         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.66         0.91          1.459 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      82.74        43.77         52.93
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.52          0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17    1.459     6.00    52.93
      + ID2= 2 ( 60300):   352.30   30.398     6.33    60.45
        ================================================
        ID = 3 ( 50340):   361.46   30.980     6.33    60.25

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   346.28   15.790     6.17    60.13
      + ID2= 2 ( 50340):   361.46   30.980     6.33    60.25
        ================================================
        ID = 3 ( 50350):   707.75   46.159     6.25    60.20

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        134.05        0.0450
                  24.00        133.67        0.0450
                  30.00        131.85        0.0450
                  36.00        131.42        0.0450
                  42.00        130.48        0.0450
                  48.00        130.42        0.0350      Main Channel
                  54.00        130.42        0.0350      Main Channel
                  60.00        130.62        0.0450
                  66.00        130.77        0.0450
                  72.00        131.03        0.0450
                  78.00        131.43        0.0450
                  84.00        131.38        0.0450
                  90.00        131.33        0.0450
                  96.00        131.98        0.0450
                 102.00        133.31        0.0450
                 120.00        133.95        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   130.42    .133E+02        0.0          0.03      768.63
        0.19   130.61    .383E+04        1.6          0.61       40.07
        0.37   130.79    .994E+04        6.6          0.97       25.18
        0.56   130.98    .179E+05       15.1          1.23       19.81
        0.75   131.16    .272E+05       27.2          1.46       16.72
        0.93   131.35    .377E+05       42.2          1.64       14.88
        1.12   131.54    .521E+05       60.9          1.71       14.26
        1.30   131.72    .683E+05       87.2          1.86       13.07
        1.49   131.91    .857E+05      119.1          2.03       11.99
        1.68   132.09    .104E+06      157.8          2.22       10.96
        1.86   132.28    .122E+06      201.6          2.41       10.11
        2.05   132.47    .141E+06      250.1          2.59        9.41
        2.23   132.65    .160E+06      303.1          2.76        8.82
        2.42   132.84    .180E+06      360.6          2.93        8.32
        2.61   133.02    .200E+06      422.5          3.08        7.90
        2.79   133.21    .221E+06      488.7          3.24        7.53
        2.98   133.40    .242E+06      552.2          3.34        7.29
        3.16   133.58    .264E+06      613.6          3.40        7.17
        3.35   133.77    .288E+06      658.8          3.34        7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    46.16    6.25  60.20      0.97       1.65
   OUTFLOW: ID= 1 ( 60350)  707.75    40.61    6.50  60.19      0.91       1.61


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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.03   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.142 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.448
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.280 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.466
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.340

     PEAK FLOW       (cms)=   0.318 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.476
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.67   0.318     6.17    51.48
      + ID2= 2 (******):     2.22   0.280     6.08    51.47
        ================================================
        ID = 3 (******):     4.89   0.597     6.17    51.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):     4.89      0.60      6.17   51.47
     ================================================
     ID= 2  (   2)    :     2.44      0.30      6.17   51.47
     ID= 3  (   2)    :     2.44      0.30      6.17   51.47
     ID= 4  (   2)    :     0.00      0.00      0.00    0.00
     ID= 5  (   2)    :     0.00      0.00      0.00    0.00
     ID= 6  (   2)    :     0.00      0.00      0.00    0.00

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.142     6.08    51.45
      + ID2= 2 (******):     2.44   0.298     6.17    51.47
        ================================================
        ID = 3 (******):     3.48   0.436     6.08    51.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.15   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.480

     PEAK FLOW       (cms)=   0.463 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.483
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

```
      Unit Hyd Qpeak  (cms)=   0.071

      PEAK FLOW       (cms)=   0.049 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  51.109
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.603

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.15   0.463     6.17    51.48
      + ID2= 2 (******):     0.26   0.049     6.00    51.11
        ================================================
        ID = 3 (******):     4.41   0.491     6.17    51.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.41   0.491     6.17    51.46
      + ID2= 2 (******):     3.48   0.436     6.08    51.46
        ================================================
        ID = 1 (******):     7.89   0.925     6.17    51.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.78   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

      Unit Hyd Qpeak  (cms)=   0.199

      PEAK FLOW       (cms)=   0.141 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  51.199
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.604

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.14   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

      Unit Hyd Qpeak  (cms)=   0.292

      PEAK FLOW       (cms)=   0.265 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  51.470
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.607

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.67   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

      Unit Hyd Qpeak  (cms)=   0.122

      PEAK FLOW       (cms)=   0.100 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  51.415
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.607

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.47   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

      Unit Hyd Qpeak  (cms)=   0.170

      PEAK FLOW       (cms)=   0.164 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  51.482
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.608

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.67   0.100     6.08    51.41
      + ID2= 2 (******):     2.14   0.265     6.17    51.47
        ================================================
        ID = 3 (******):     2.81   0.362     6.08    51.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.81   0.362     6.08    51.46
      + ID2= 2 (******):     0.78   0.141     6.00    51.20
        ================================================
        ID = 1 (******):     3.59   0.489     6.08    51.40

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.59   0.489     6.08    51.40
      + ID2= 2 (******):     1.47   0.164     6.17    51.48
        ================================================
        ID = 3 (******):     5.06   0.642     6.08    51.42

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     7.89   0.925     6.17    51.46
      + ID2= 2 (******):     5.06   0.642     6.08    51.42
        ================================================
        ID = 3 ( 50360):    12.95   1.551     6.08    51.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50360):    12.95   1.551     6.08    51.45
      + ID2= 2 ( 60350):   707.75  40.610     6.50    60.19
        ================================================
        ID = 1 ( 50360):   720.69  41.652     6.42    60.03

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.30        0.0450
                    6.00         127.39        0.0450
                   12.00         127.46        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04        0.0450
                   72.00         123.15        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME     FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)       (cms)         (m/s)      (min)
        0.09   122.98    .246E+03         0.4          0.31      10.02
        0.33   123.21    .251E+04        11.8          0.86       3.57
        0.56   123.45    .538E+04        39.9          1.37       2.25
        0.80   123.68    .842E+04        81.1          1.78       1.73
        1.04   123.92    .116E+05       134.5          2.13       1.44
        1.27   124.16    .150E+05       200.0          2.46       1.25
        1.51   124.39    .185E+05       278.3          2.78       1.11
        1.74   124.63    .220E+05       367.4          3.08       1.00
        1.98   124.86    .257E+05       466.7          3.35       0.92
        2.22   125.10    .294E+05       576.1          3.61       0.85
        2.45   125.34    .332E+05       695.4          3.86       0.80
        2.69   125.57    .371E+05       824.8          4.10       0.75
        2.92   125.81    .410E+05       963.8          4.33       0.71
        3.16   126.04    .451E+05      1112.3          4.55       0.68
        3.39   126.28    .492E+05      1270.1          4.76       0.65
        3.63   126.51    .534E+05      1437.3          4.97       0.62
        3.87   126.75    .576E+05      1613.7          5.16       0.60
        4.10   126.99    .620E+05      1791.1          5.33       0.58
        4.34   127.22    .665E+05      1970.4          5.47       0.56

                                      <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)   720.69    41.65    6.42  60.03      0.57      1.38
   OUTFLOW: ID= 1 ( 60390)   720.69    41.68    6.50  60.03      0.57      1.38


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--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

      Unit Hyd Qpeak  (cms)=   3.925

      PEAK FLOW       (cms)=   3.007 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  47.944
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.566

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   3.007     6.08    47.94
      + ID2= 2 ( 60390):   720.69  41.678     6.50    60.03
        ================================================
        ID = 3 ( 50390):   741.24  42.892     6.42    59.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------

                                    IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=          11.83           6.10
      Dep. Storage     (mm)=           2.00           6.08
      Average Slope     (%)=           1.50           1.50
      Length            (m)=         345.74          42.00
      Mannings n             =         0.015          0.280

      Max.Eff.Inten.(mm/hr)=         111.66         119.46
                  over (min)           5.00          15.00
      Storage Coeff.  (min)=           4.96 (ii)     12.86 (ii)
      Unit Hyd. Tpeak (min)=           5.00          15.00
      Unit Hyd. peak  (cms)=           0.22           0.08

                                                              *TOTALS*
      PEAK FLOW       (cms)=           2.82           1.28       3.949 (iii)
      TIME TO PEAK    (hrs)=           6.00           6.08        6.00
      RUNOFF VOLUME    (mm)=          82.74          52.52       68.33
      TOTAL RAINFALL   (mm)=          84.74          84.74       84.74
      RUNOFF COEFFICIENT   =           0.98           0.62        0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  80.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.70        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04    0.0450 /0.0350  Main Channel
                   72.00         122.86        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
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                108.00        124.18        0.0450
                120.00        127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.12   122.98    .275E+03       0.7         0.35       6.78
       0.36   123.21    .218E+04      14.7         0.95       2.47
       0.59   123.45    .437E+04      44.6         1.44       1.63
       0.83   123.68    .670E+04      87.2         1.84       1.28
       1.06   123.92    .916E+04     141.6         2.19       1.08
       1.30   124.16    .117E+05     208.1         2.51       0.94
       1.54   124.39    .144E+05     287.0         2.82       0.84
       1.77   124.63    .171E+05     376.7         3.11       0.76
       2.01   124.86    .199E+05     476.5         3.38       0.70
       2.24   125.10    .228E+05     586.1         3.64       0.65
       2.48   125.33    .257E+05     705.6         3.88       0.61
       2.71   125.57    .287E+05     835.1         4.12       0.57
       2.95   125.80    .317E+05     974.0         4.35       0.54
       3.19   126.04    .348E+05    1122.3         4.56       0.52
       3.42   126.28    .379E+05    1279.8         4.77       0.49
       3.66   126.51    .411E+05    1446.6         4.97       0.47
       3.89   126.75    .444E+05    1622.6         5.17       0.46
       4.13   126.98    .477E+05    1786.6         5.29       0.45
       4.36   127.22    .513E+05    1942.9         5.36       0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     3.95    6.00  68.33      0.18      0.41
   OUTFLOW: ID= 1 ( 60370)   17.93     3.26    6.00  68.33      0.17      0.39


--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   741.24  42.892     6.42    59.70
      + ID2= 2 ( 60370):    17.93   3.263     6.00    68.33
        ================================================
        ID = 3 ( 50400):   759.17  44.180     6.42    59.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        125.01        0.0450
                  20.00        123.70        0.0450
                  25.00        123.04        0.0450
                  30.00        120.84        0.0450
                  35.00        119.81    0.0450 /0.0350  Main Channel
                  40.00        119.74        0.0350      Main Channel
                  65.00        120.12        0.0450
                  90.00        120.58        0.0450
                 100.00        125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.07   119.81    .209E+03       0.1         0.27      34.81
       0.35   120.09    .326E+04       4.7         0.83      11.50
       0.62   120.36    .916E+04      21.3         1.34       7.16
       0.90   120.63    .176E+05      51.5         1.68       5.69
       1.17   120.91    .270E+05      96.6         2.05       4.67
       1.44   121.18    .367E+05     153.8         2.41       3.98
       1.72   121.46    .466E+05     222.1         2.74       3.50
       1.99   121.73    .567E+05     300.7         3.05       3.14
       2.26   122.00    .669E+05     389.1         3.34       2.87
       2.54   122.28    .774E+05     487.1         3.62       2.65
       2.81   122.55    .880E+05     594.2         3.88       2.47
       3.09   122.82    .988E+05     710.4         4.13       2.32
       3.36   123.10    .110E+06     834.4         4.36       2.20
       3.63   123.37    .121E+06     964.4         4.57       2.10
       3.91   123.65    .133E+06    1104.4         4.76       2.01
       4.18   123.92    .145E+06    1250.0         4.93       1.94
       4.45   124.19    .159E+06    1406.7         5.09       1.88
       4.73   124.47    .172E+06    1575.5         5.25       1.82
       5.00   124.74    .187E+06    1756.1         5.39       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  759.17    44.18    6.42  59.90      0.83      1.58
   OUTFLOW: ID= 1 ( 60400)  759.17    43.59    6.50  59.90      0.82      1.57


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--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area     (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     111.66        26.14
                   over (min)      5.00        95.00
     Storage Coeff.  (min)=       4.26 (ii)   91.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00        95.00
     Unit Hyd. peak  (cms)=       0.23         0.01
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.60         0.18        0.630 (iii)
     TIME TO PEAK    (hrs)=       6.00         7.50         6.00
     RUNOFF VOLUME    (mm)=      82.74        40.16        50.83
     TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
     RUNOFF COEFFICIENT   =       0.98         0.47         0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40410):     7.92   0.630     6.00    50.83
      + ID2= 2 ( 60400):   759.17  43.594     6.50    59.90
        ================================================
        ID = 3 ( 50410):   767.09  43.759     6.50    59.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.273 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.439
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.273 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.439
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   6.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.37

     Unit Hyd Qpeak  (cms)=   0.697

     PEAK FLOW       (cms)=   0.693 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  51.488
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.148 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.428
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   6.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.37

     Unit Hyd Qpeak  (cms)=   0.697

     PEAK FLOW       (cms)=   0.693 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  51.488
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.75   0.693     6.25    51.49
      + ID2= 2 (******):     1.01   0.148     6.08    51.43
        ================================================
        ID = 3 (******):     7.76   0.817     6.17    51.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.281 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.461
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.169

     PEAK FLOW       (cms)=   0.153 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.470
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.24   0.153     6.17    51.47
      + ID2= 2 (******):     2.16   0.281     6.08    51.46
        ================================================
        ID = 3 (******):     3.40   0.433     6.08    51.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     3.40   0.433     6.08    51.46
      + ID2= 2 (******):     7.76   0.817     6.17    51.48
        ================================================
        ID = 1 (******):    11.16   1.246     6.17    51.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.68   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.319 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.476
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

       (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.109 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.398
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      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.607

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.129

      PEAK FLOW       (cms)=   0.097 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  51.348
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.606

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.61   0.097     6.00    51.35
      + ID2= 2 (******):     2.44   0.298     6.17    51.47
        ================================================
        ID = 3 (******):     3.06   0.390     6.08    51.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.95   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.158

      PEAK FLOW       (cms)=   0.135 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  51.439
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.607

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

      Unit Hyd Qpeak  (cms)=   0.196

      PEAK FLOW       (cms)=   0.172 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  51.455
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.607

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.28   0.172     6.08    51.46
      + ID2= 2 (******):     0.95   0.135     6.08    51.44
        ================================================
        ID = 3 (******):     2.23   0.307     6.08    51.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     2.23   0.307     6.08    51.45
      + ID2= 2 (******):     0.71   0.109     6.08    51.40
        ================================================
        ID = 1 (******):     2.94   0.416     6.08    51.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.94   0.416     6.08    51.44
      + ID2= 2 (******):     1.92   0.273     6.08    51.44
        ================================================
        ID = 3 (******):     4.86   0.689     6.08    51.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.86   0.689     6.08    51.44
      + ID2= 2 (******):     0.54   0.083     6.08    51.40
        ================================================
        ID = 1 (******):     5.40   0.772     6.08    51.43

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     5.40   0.772     6.08    51.43
      + ID2= 2 (******):     2.68   0.319     6.17    51.48
        ================================================
        ID = 3 (******):     8.08   1.079     6.08    51.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     8.08   1.079     6.08    51.45
      + ID2= 2 (******):     3.06   0.390     6.08    51.45
        ================================================
        ID = 1 (******):    11.13   1.469     6.08    51.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    11.13   1.469     6.08    51.45
      + ID2= 2 (******):    11.16   1.246     6.17    51.48
        ================================================
        ID = 3 (******):    22.30   2.666     6.08    51.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.197

      PEAK FLOW       (cms)=   0.171 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  51.448
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.607

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.174

      PEAK FLOW       (cms)=   0.149 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  51.439
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.607

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  18.31   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.457

      PEAK FLOW       (cms)=   1.565 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  51.493
      TOTAL RAINFALL   (mm)=  84.737
      RUNOFF COEFFICIENT   =   0.608

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.05   0.149     6.08    51.44
      + ID2= 2 (******):    18.31   1.565     6.33    51.49
        ================================================
        ID = 3 (******):    19.36   1.658     6.33    51.49

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    19.36   1.658     6.33    51.49
      + ID2= 2 (******):     1.24   0.171     6.08    51.45
        ================================================
        ID = 1 (******):    20.60   1.776     6.25    51.49

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    22.30   2.666     6.08    51.46
      + ID2= 2 (******):    20.60   1.776     6.25    51.49
        ================================================
        ID = 3 (******):    42.90   4.349     6.17    51.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area     (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.95        46.62
      Dep. Storage     (mm)=       2.00         7.70
      Average Slope     (%)=       1.90         1.90
      Length            (m)=     671.17        89.00
      Mannings n           =      0.015        0.240

      Max.Eff.Inten.(mm/hr)=     111.66        78.23
                over (min)          5.00        20.00
      Storage Coeff.  (min)=       6.89 (ii)   19.35 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.84         5.25        8.519 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17         6.00
      RUNOFF VOLUME    (mm)=      82.74        45.52        54.82
      TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
      RUNOFF COEFFICIENT   =       0.98         0.54         0.65


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40420):    67.57   8.519     6.00    54.82
      + ID2= 2 (******):    42.90   4.349     6.17    51.47
        ================================================
        ID = 3 (******):   110.47  11.983     6.00    53.52

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50410):   767.09  43.759     6.50    59.81
      + ID2= 2 (******):   110.47  11.983     6.00    53.52
        ================================================
        ID = 3 ( 50420):   877.56  50.916     6.50    59.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        121.79        0.0450
                   12.00        116.08        0.0450
                   40.00        115.59    0.0450 /0.0350  Main Channel
                   44.00        114.89        0.0350      Main Channel
```

```
                  48.00        114.52        0.0350      Main Channel
                  52.00        115.72    0.0350 /0.0450  Main Channel
                  56.00        115.93        0.0450
                  60.00        117.24        0.0450
                  64.00        119.04        0.0450
                  68.00        120.69        0.0450
                  72.00        121.01        0.0450
                  74.00        121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.36   114.88    .645E+03        0.7        0.83      14.38
        0.71   115.23    .236E+04        4.6        1.41       8.47
        1.07   115.59    .489E+04       12.6        1.84       6.48
        1.44   115.96    .112E+05       30.9        1.97       6.04
        1.80   116.33    .227E+05       69.1        2.17       5.49
        2.17   116.70    .351E+05      125.6        2.56       4.65
        2.54   117.06    .479E+05      197.5        2.95       4.04
        2.91   117.43    .612E+05      283.9        3.32       3.59
        3.28   117.80    .749E+05      384.1        3.66       3.25
        3.65   118.17    .891E+05      497.4        3.99       2.99
        4.02   118.54    .104E+06      623.5        4.30       2.77
        4.39   118.91    .119E+06      762.2        4.59       2.60
        4.76   119.28    .134E+06      913.1        4.87       2.45
        5.13   119.65    .150E+06     1076.2        5.13       2.32
        5.49   120.02    .166E+06     1251.7        5.38       2.21
        5.86   120.39    .183E+06     1439.5        5.62       2.12
        6.23   120.75    .200E+06     1634.3        5.84       2.04
        6.60   121.12    .219E+06     1831.3        5.99       1.99
        6.97   121.49    .238E+06     2058.5        6.20       1.92

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420)  877.56    50.92    6.50  59.02      1.63      2.07
   OUTFLOW: ID= 1 ( 60420)  877.56    50.01    6.58  59.02      1.62      2.07



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       21.41         11.03
     Dep. Storage     (mm)=        2.00          7.80
     Average Slope     (%)=        3.50          3.50
     Length            (m)=      465.00        102.00
     Mannings n           =       0.015         0.320

     Max.Eff.Inten.(mm/hr)=      111.66         71.44
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=        4.60 (ii)    18.48 (ii)
     Unit Hyd. Tpeak (min)=        5.00         20.00
     Unit Hyd. peak  (cms)=        0.23          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=        6.28          1.15          7.082 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=       82.74         42.76          68.35
     TOTAL RAINFALL   (mm)=       84.74         84.74          84.74
     RUNOFF COEFFICIENT   =        0.98          0.50           0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40430):    32.43   7.082     6.00    68.35
      + ID2= 2 ( 60420):   877.56  50.009     6.58    59.02
        ================================================
        ID = 3 ( 50430):   909.99  51.328     6.50    59.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         116.29        0.0450
                 20.00         114.05        0.0450
                 25.00         110.83        0.0450
                 30.00         109.36        0.0450
                 35.00         108.23    0.0450 /0.0350  Main Channel
                 40.00         107.52        0.0350      Main Channel
                 45.00         108.00    0.0350 /0.0450  Main Channel
                 50.00         107.84        0.0450
                 55.00         108.21        0.0450
                 60.00         108.95        0.0450
                 65.00         109.35        0.0450
                 70.00         109.41        0.0450
                 75.00         109.48        0.0450
                 80.00         109.77        0.0450
                 85.00         112.20        0.0450
                 90.00         115.48        0.0450
                100.00         116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.24   107.76    .285E+03        0.4        0.74      12.74
        0.48   108.00    .146E+04        2.6        1.01       9.32
        0.97   108.49    .695E+04       23.3        1.90       4.97
        1.46   108.97    .141E+05       64.5        2.60       3.63
        1.94   109.46    .233E+05      116.9        2.84       3.33
        2.43   109.95    .371E+05      214.6        3.28       2.88
        2.92   110.44    .519E+05      350.2        3.83       2.47
        3.41   110.92    .675E+05      515.9        4.34       2.18
        3.89   111.41    .836E+05      711.3        4.82       1.96
        4.38   111.90    .100E+06      933.4        5.28       1.79
        4.87   112.39    .117E+06     1182.4        5.71       1.65
        5.35   112.87    .135E+06     1458.0        6.13       1.54
        5.84   113.36    .153E+06     1758.3        6.52       1.45
        6.33   113.85    .171E+06     2082.9        6.90       1.37
        6.82   114.34    .190E+06     2410.6        7.19       1.31
        7.30   114.82    .210E+06     2758.9        7.43       1.27
        7.79   115.31    .232E+06     3143.1        7.68       1.23
        8.28   115.80    .255E+06     3473.3        7.71       1.23
        8.77   116.29    .282E+06     3812.4        7.67       1.23

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  909.99    51.33    6.50  59.35      1.30      2.33
   OUTFLOW: ID= 1 ( 60430)  909.99    51.36    6.58  59.35      1.30      2.33



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--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       37.70         19.42
     Dep. Storage     (mm)=        2.00          6.60
     Average Slope     (%)=        2.50          2.50
     Length            (m)=      617.06        45.00
     Mannings n           =       0.015         0.290

     Max.Eff.Inten.(mm/hr)=      111.66         37.27
                   over (min)        5.00         45.00
     Storage Coeff.  (min)=        7.02 (ii)    41.02 (ii)
     Unit Hyd. Tpeak (min)=        5.00         45.00
     Unit Hyd. peak  (cms)=        0.17          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.56          0.98          3.891 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.58           6.00
     RUNOFF VOLUME    (mm)=       82.74         40.70          57.94
     TOTAL RAINFALL   (mm)=       84.74         84.74          84.74
     RUNOFF COEFFICIENT   =        0.98          0.48           0.68

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40450):    30.40   3.891     6.00    57.94
      + ID2= 2 ( 60440):   967.10  52.992     6.58    59.80
        ================================================
        ID = 3 ( 50450):   997.50  54.369     6.58    59.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         97.16         0.0450
                  3.00         96.00         0.0450
                  6.00         95.32         0.0450
                  9.00         94.64         0.0450
                 12.00         94.43         0.0450
                 15.00         94.29         0.0450
                 18.00         94.10         0.0350      Main Channel
                 21.00         94.02         0.0350      Main Channel
                 24.00         93.70         0.0350      Main Channel
                 27.00         94.22    0.0350 /0.0450  Main Channel
                 30.00         94.90         0.0450
                 32.00         95.30         0.0450

                                                                          |
     Max.Eff.Inten.(mm/hr)=      111.66         64.60                     |
                   over (min)        5.00         20.00                  |
     Storage Coeff.  (min)=        6.03 (ii)    15.25 (ii)               |
     Unit Hyd. Tpeak (min)=        5.00         20.00                    |
     Unit Hyd. peak  (cms)=        0.19          0.07                    |
                                                          *TOTALS*        |
     PEAK FLOW       (cms)=       10.88          1.86          12.186 (iii)|
     TIME TO PEAK    (hrs)=        6.00          6.17           6.00     |
     RUNOFF VOLUME    (mm)=       82.74         37.69          66.97     |
     TOTAL RAINFALL   (mm)=       84.74         84.74          84.74     |
     RUNOFF COEFFICIENT   =        0.98          0.44           0.79     |

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40440):    57.11  12.186     6.00    66.97
      + ID2= 2 ( 60430):   909.99  51.363     6.58    59.35
        ================================================
        ID = 3 ( 50440):   967.10  53.332     6.58    59.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        104.01        0.0450
                 10.00        103.90        0.0450
                 20.00        103.74        0.0450
                 30.00        103.66        0.0450
                 40.00        103.60        0.0450
                 50.00        102.52        0.0450
                 60.00        101.16        0.0450
                 70.00        100.60        0.0450
                 80.00        100.17        0.0450
                 90.00         99.85        0.0450
                100.00         97.89        0.0350      Main Channel
                110.00         97.62        0.0350      Main Channel
                120.00         99.12        0.0450
                130.00         99.16        0.0450
                140.00         99.36        0.0450
                150.00         99.66        0.0450
                160.00         99.68        0.0450
                180.00         99.76        0.0450
                190.00        104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.27    97.89    .102E+04        1.2        0.77      13.74
        0.60    98.21    .381E+04        9.4        1.56       6.74
        0.92    98.53    .738E+04       24.3        2.08       5.05
        1.24    98.86    .117E+05       46.2        2.50       4.22
        1.56    99.18    .171E+05       76.6        2.84       3.71
        1.89    99.50    .264E+05      124.5        2.98       3.53
        2.21    99.82    .403E+05      189.1        2.96       3.56
        2.53   100.15    .597E+05      286.1        3.03       3.48
        2.85   100.47    .809E+05      417.7        3.26       3.23
        3.17   100.79    .104E+06      580.2        3.53       2.98
        3.50   101.11    .128E+06      771.7        3.81       2.77
        3.82   101.44    .153E+06      996.3        4.10       2.57
        4.14   101.76    .179E+06     1248.4        4.40       2.40
        4.46   102.08    .206E+06     1526.4        4.68       2.25
        4.79   102.40    .233E+06     1829.8        4.96       2.13
        5.11   102.73    .261E+06     2156.4        5.22       2.02
        5.43   103.05    .290E+06     2507.0        5.47       1.93
        5.75   103.37    .319E+06     2882.7        5.71       1.85
        6.08   103.69    .350E+06     3194.7        5.77       1.83

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  967.10    53.33    6.58  59.80      1.32      2.57
   OUTFLOW: ID= 1 ( 60440)  967.10    52.99    6.58  59.80      1.31      2.56



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       13.37         17.02
     Dep. Storage     (mm)=        2.00          6.90
     Average Slope     (%)=        0.80          0.80
     Length            (m)=      450.16        150.00
     Mannings n           =       0.015         0.300

     Max.Eff.Inten.(mm/hr)=      111.66         37.27
                   over (min)        5.00         45.00
     Storage Coeff.  (min)=        7.02 (ii)    41.02 (ii)
     Unit Hyd. Tpeak (min)=        5.00         45.00
     Unit Hyd. peak  (cms)=        0.17          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.56          0.98          3.891 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.58           6.00
     RUNOFF VOLUME    (mm)=       82.74         40.70          57.94
     TOTAL RAINFALL   (mm)=       84.74         84.74          84.74
     RUNOFF COEFFICIENT   =        0.98          0.48           0.68

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40450):    30.40   3.891     6.00    57.94
      + ID2= 2 ( 60440):   967.10  52.992     6.58    59.80
        ================================================
        ID = 3 ( 50450):   997.50  54.369     6.58    59.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         97.16         0.0450
                  3.00         96.00         0.0450
                  6.00         95.32         0.0450
                  9.00         94.64         0.0450
                 12.00         94.43         0.0450
                 15.00         94.29         0.0450
                 18.00         94.10         0.0350      Main Channel
                 21.00         94.02         0.0350      Main Channel
                 24.00         93.70         0.0350      Main Channel
                 27.00         94.22    0.0350 /0.0450  Main Channel
                 30.00         94.90         0.0450
                 32.00         95.30         0.0450
```

```
                  34.00         95.78        0.0450
                  36.00         96.25        0.0450
                  38.00         96.60        0.0450
                  48.00         97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.83    .942E+02        0.1         0.39      30.45
        0.27   93.96    .377E+03        0.3         0.62      19.18
        0.40   94.09    .911E+03        0.9         0.69      17.28
        0.59   94.29    .230E+04        3.4         1.06      11.15
        0.78   94.48    .428E+04        7.9         1.32       8.98
        0.97   94.67    .679E+04       14.6         1.53       7.74
        1.16   94.86    .963E+04       23.7         1.75       6.77
        1.35   95.05    .127E+05       34.9         1.96       6.07
        1.54   95.24    .160E+05       48.1         2.14       5.54
        1.73   95.43    .196E+05       63.6         2.31       5.13
        1.92   95.62    .233E+05       81.2         2.48       4.79
        2.11   95.81    .273E+05      101.0         2.63       4.51
        2.30   96.00    .315E+05      123.0         2.78       4.27
        2.49   96.19    .360E+05      147.8         2.93       4.06
        2.68   96.38    .406E+05      174.6         3.07       3.87
        2.87   96.57    .454E+05      203.7         3.20       3.71
        3.06   96.76    .505E+05      232.7         3.28       3.62
        3.25   96.95    .562E+05      264.9         3.36       3.54
        3.44   97.14    .624E+05      300.8         3.43       3.46

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50450)  997.50    54.37    6.58  59.74       1.62      2.21
    OUTFLOW: ID= 1 ( 60450)  997.50    53.91    6.67  59.74       1.61      2.20


 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40460)|   Area    (ha)=  22.40
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
 --------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      15.36         7.04
      Dep. Storage     (mm)=       2.00         6.68
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     386.43        40.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=     111.66       109.65
                   over (min)        5.00        15.00
      Storage Coeff.  (min)=       4.61 (ii)   11.50 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.22         0.09
                                                    *TOTALS*
      PEAK FLOW       (cms)=       3.58         1.38          4.800 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      82.74        44.60          64.75
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.53           0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  72.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD  ( 50460)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40460):    22.40   4.800     6.00    64.75
      + ID2= 2 ( 60450):   997.50  53.913     6.67    59.74
        ================================================
        ID = 3 ( 50460):  1019.90  54.520     6.67    59.85

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60460)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         91.61        0.0450
                    3.00         91.57        0.0450
                    6.00         91.15        0.0450
                    9.00         90.70        0.0450
                   12.00         89.72        0.0450
                   15.00         88.86        0.0450
                   18.00         88.38    0.0450 /0.0350  Main Channel
                   21.00         87.96        0.0350      Main Channel
                   24.00         88.18    0.0350 /0.0450  Main Channel
                   26.00         88.19        0.0450
                   28.00         88.30        0.0450
                   30.00         90.32        0.0450
                   32.00         90.49        0.0450
                   34.00         90.80        0.0450
                   36.00         90.85        0.0450
                   38.00         90.97        0.0450
                   40.00         91.15        0.0450
                   42.00         91.29        0.0450
                   44.00         91.40        0.0450
                   46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   88.07    .589E+02        0.0         0.34      23.89
        0.21   88.18    .235E+03        0.3         0.54      15.05
        0.41   88.38    .106E+04        1.8         0.85       9.64
        0.61   88.57    .211E+04        5.3         1.22       6.69
        0.81   88.77    .330E+04       10.2         1.51       5.40
        1.01   88.97    .462E+04       16.6         1.76       4.63
        1.21   89.17    .603E+04       24.5         1.99       4.10
        1.41   89.37    .753E+04       33.8         2.19       3.72
        1.61   89.57    .912E+04       44.4         2.38       3.42
        1.81   89.77    .108E+05       56.4         2.56       3.19
        2.00   89.97    .125E+05       69.9         2.72       2.99
        2.20   90.17    .144E+05       84.7         2.88       2.83
        2.40   90.37    .163E+05       99.8         3.00       2.72
        2.60   90.56    .184E+05      114.7         3.04       2.68
        2.80   90.76    .208E+05      132.8         3.13       2.61
        3.00   90.96    .235E+05      148.4         3.09       2.64
        3.20   91.16    .266E+05      170.7         3.13       2.60
        3.40   91.36    .302E+05      194.9         3.16       2.58
        3.60   91.56    .342E+05      223.5         3.20       2.55

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50460) 1019.90    54.52    6.67  59.85       1.77      2.53
    OUTFLOW: ID= 1 ( 60460) 1019.90    54.29    6.75  59.85       1.77      2.52


 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40470)|   Area    (ha)=  90.19
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
 --------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      59.53        30.66
      Dep. Storage     (mm)=       2.00         5.90
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     775.42        40.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=     111.66       102.61
                   over (min)       10.00        20.00
      Storage Coeff.  (min)=       8.23 (ii)   16.55 (ii)
      Unit Hyd. Tpeak (min)=      10.00        20.00
      Unit Hyd. peak  (cms)=       0.13         0.06
                                                    *TOTALS*
      PEAK FLOW       (cms)=      12.62         4.64          15.938 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      82.74        46.36          66.01
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.55           0.78


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  76.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD  ( 50470)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40470):    90.19  15.938     6.00    66.01
      + ID2= 2 ( 60460):  1019.90  54.289     6.75    59.85
        ================================================
        ID = 3 ( 50470):  1110.09  57.650     6.67    60.35

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60470)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         89.19        0.0450
                    2.00         88.89        0.0450
                    4.00         88.54        0.0450
                    6.00         88.31        0.0450
                    8.00         88.14        0.0450
                   10.00         88.02        0.0450
                   12.00         87.99        0.0450
                   14.00         87.90        0.0450
                   16.00         87.84        0.0450
                   19.00         87.55        0.0450
                   22.00         86.85        0.0450
                   25.00         86.23        0.0350      Main Channel
                   28.00         86.23        0.0350      Main Channel
                   31.00         86.60        0.0450
                   34.00         87.49        0.0450
                   37.00         88.15        0.0450
                   41.00         88.21        0.0450
                   45.00         88.29        0.0450
                   48.00         88.36        0.0450
                   50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50470) 1110.09    57.65    6.67  60.35       2.14      1.71
    OUTFLOW: ID= 1 ( 60470) 1110.09    56.76    6.75  60.35       2.13      1.71


 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40480)|   Area    (ha)=  56.43
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
 --------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      42.82        13.61
      Dep. Storage     (mm)=       2.00         5.80
      Average Slope     (%)=       1.90         1.90
      Length            (m)=     613.35        40.00
      Mannings n           =      0.015        0.260

      Max.Eff.Inten.(mm/hr)=     111.66       148.96
                   over (min)        5.00        15.00
      Storage Coeff.  (min)=       6.52 (ii)   11.43 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.18         0.09
                                                    *TOTALS*
      PEAK FLOW       (cms)=       9.64         3.74          12.992 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      82.74        54.57          71.18
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.64           0.84

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  78.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD  ( 50480)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40480):    56.43  12.992     6.00    71.18
      + ID2= 2 ( 60470):  1110.09  56.756     6.75    60.35
        ================================================
        ID = 3 ( 50480):  1166.52  58.179     6.75    60.87

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60480)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         86.90        0.0450
                    2.00         86.76        0.0450
                    4.00         85.96        0.0450
                    6.00         85.44        0.0450
                    8.00         84.83        0.0450
                   10.00         84.50        0.0450
                   12.00         84.15        0.0450
                   14.00         83.85        0.0350      Main Channel
                   16.00         83.86        0.0350      Main Channel
                   18.00         83.99    0.0350 /0.0450  Main Channel
                   20.00         84.27        0.0450
                   22.00         84.55        0.0450
```

```
                  24.00         84.88        0.0450
                  26.00         85.37        0.0450
                  27.00         85.68        0.0450
                  28.00         85.91        0.0450
                  29.00         86.08        0.0450
                  30.00         86.21        0.0450
                  31.00         86.29        0.0450
                  34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.16    84.01    .165E+03       0.3         0.48      10.34
        0.32    84.17    .460E+03       1.2         0.77       6.41
        0.48    84.33    .855E+03       2.8         0.98       5.07
        0.64    84.48    .135E+04       5.2         1.14       4.35
        0.80    84.64    .193E+04       8.3         1.28       3.88
        0.95    84.80    .261E+04      12.3         1.40       3.53
        1.11    84.96    .337E+04      17.4         1.53       3.23
        1.27    85.12    .419E+04      23.5         1.66       2.97
        1.43    85.28    .506E+04      30.5         1.79       2.77
        1.59    85.44    .599E+04      38.5         1.90       2.60
        1.75    85.60    .697E+04      47.3         2.01       2.46
        1.91    85.76    .801E+04      57.1         2.12       2.34
        2.07    85.92    .911E+04      67.8         2.21       2.24
        2.23    86.07    .103E+05      79.5         2.30       2.15
        2.39    86.23    .115E+05      91.9         2.37       2.09
        2.54    86.39    .128E+05     105.7         2.45       2.02
        2.70    86.55    .142E+05     121.2         2.53       1.95
        2.86    86.71    .156E+05     138.0         2.62       1.89
        3.02    86.87    .171E+05     153.0         2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1166.52    58.18    6.75  60.87      1.92      2.13
   OUTFLOW: ID= 1 ( 60480) 1166.52    58.10    6.75  60.87      1.92      2.12


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60         4.16
     Dep. Storage     (mm)=       2.00         6.22
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     334.28        53.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     111.66       136.36
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.97 (ii)   13.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       3.04         0.97       3.902 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=      82.74        52.90       70.93
     TOTAL RAINFALL   (mm)=      84.74        84.74       84.74
     RUNOFF COEFFICIENT   =       0.98         0.62        0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40490):    16.76   3.902     6.00    70.93
     + ID2= 2 ( 60480):  1166.52  58.101     6.75    60.87
       ================================================
       ID = 3 ( 50490):  1183.28  58.528     6.75    61.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         85.84        0.0450
                   6.00         84.32        0.0450
                  12.00         84.21        0.0450
                  18.00         84.12        0.0450
                  24.00         84.08        0.0450
                  30.00         84.10        0.0450
                  36.00         84.03        0.0450
                  42.00         83.92        0.0450
                  48.00         83.88        0.0450
                  54.00         82.88        0.0350      Main Channel
                  60.00         83.12    0.0350 /0.0450  Main Channel
                  64.00         83.65        0.0450
                  68.00         83.60        0.0450
                  72.00         83.67        0.0450
                  76.00         83.70        0.0450
                  80.00         83.82        0.0450
                  84.00         83.90        0.0450
                  88.00         84.05        0.0450
                  92.00         84.16        0.0450
                 100.00         85.83        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.16    83.04    .332E+03       0.1         0.32      46.08
        0.31    83.19    .129E+04       0.8         0.57      26.14
        0.47    83.35    .259E+04       2.3         0.79      18.75
        0.62    83.50    .418E+04       4.5         0.96      15.43
        0.78    83.66    .626E+04       7.3         1.04      14.28
        0.93    83.81    .101E+05      11.9         1.05      14.10
        1.09    83.97    .153E+05      17.6         1.02      14.55
        1.24    84.13    .231E+05      26.2         1.00      14.73
        1.40    84.28    .341E+05      41.2         1.07      13.79
        1.55    84.44    .460E+05      61.7         1.19      12.44
        1.71    84.59    .582E+05      86.6         1.32      11.21
        1.86    84.75    .706E+05     115.2         1.45      10.21
        2.02    84.90    .831E+05     147.5         1.57       9.39
        2.17    85.06    .959E+05     183.2         1.70       8.72
        2.33    85.21    .109E+06     222.2         1.81       8.16
        2.48    85.37    .122E+06     264.5         1.93       7.68
        2.64    85.52    .135E+06     310.0         2.03       7.27
        2.79    85.68    .149E+06     358.5         2.14       6.91
        2.95    85.83    .162E+06     410.1         2.24       6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1183.28    58.53    6.75  61.02      1.53      1.17
   OUTFLOW: ID= 1 ( 60490) 1183.28    57.31    6.92  61.02      1.52      1.16


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92         4.72
     Dep. Storage     (mm)=       2.00         5.43

     Average Slope     (%)=       2.10         2.10
     Length            (m)=     370.92        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=     111.66       148.10
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.68 (ii)    9.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.22         0.12
                                                      *TOTALS*
     PEAK FLOW       (cms)=       3.82         1.47       5.287 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=      82.74        54.52       71.80
     TOTAL RAINFALL   (mm)=      84.74        84.74       84.74
     RUNOFF COEFFICIENT   =       0.98         0.64        0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40810):    20.64   5.287     6.00    71.80
     + ID2= 2 ( 60490):  1183.28  57.310     6.92    61.02
       ================================================
       ID = 3 ( 50810):  1203.92  57.697     6.92    61.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     111.66        76.90
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.25 (ii)   12.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.27         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.50         0.89       1.272 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=      82.74        40.15       47.59
     TOTAL RAINFALL   (mm)=      84.74        84.74       84.74
     RUNOFF COEFFICIENT   =       0.98         0.47        0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40500):     9.32   1.272     6.00    47.59
     + ID2= 2 ( 50810):  1203.92  57.697     6.92    61.20
       ================================================
       ID = 3 ( 50500):  1213.24  57.876     6.92    61.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.432 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.483
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.078 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.264
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.605

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.132 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.439
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     111.66        83.83
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       2.08 (ii)    2.08 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.31         0.31
                                                      *TOTALS*
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      PEAK FLOW       (cms)=       0.14         0.00          0.139 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      82.74        51.50          82.42
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.61           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      13.25        13.25
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       2.00         2.00
      Length            (m)=     420.00        30.00
      Mannings n           =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=     111.66       130.11
                    over (min)       5.00        10.00
      Storage Coeff.  (min)=       4.70 (ii)    6.45 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.22         0.14
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.40         4.10          6.496 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      82.74        58.55          65.80
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.69           0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    1.8600      0.9862
                         0.0560      0.3250   |    2.1000      1.0580
                         0.2600      0.4718   |    2.2000      1.2000
                         0.7400      0.6512   |   10.0000      1.2500
                         1.4100      0.8427   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.500     6.496      6.00      65.80
   OUTFLOW: ID= 1 (******)     26.500     1.698      6.25      65.75
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =      0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 26.13
                  TIME SHIFT OF PEAK FLOW         (min)= 15.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.9350

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  --------------------------
  | Junction Command(30651004) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    26.50   1.698     6.25    65.75
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    26.50   1.698     6.25    65.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.89         0.04
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.40         1.00
      Length            (m)=     115.50         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=     111.66        83.83
                    over (min)       5.00         5.00
      Storage Coeff.  (min)=       3.51 (ii)    3.51 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.26         0.26
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.20         0.01          1.205 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      82.74        51.50          82.42
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.61           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.93   0.132     6.08    51.44
      + ID2= 2 (******):     3.93   1.205     6.00    82.42
        ================================================
        ID = 3 (******):     4.86   1.324     6.00    76.49

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.86   1.324     6.00    76.49
      + ID2= 2 (******):     0.45   0.139     6.00    82.42
        ================================================
        ID = 1 (******):     5.31   1.463     6.00    77.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.31   1.463     6.00    77.00
      + ID2= 2 (******):    26.50   1.698     6.25    65.75
        ================================================
        ID = 3 (******):    31.81   2.463     6.00    67.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   1.308 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  51.492
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62   1.308     6.33    51.49
      + ID2= 2 (******):    31.81   2.463     6.00    67.63
        ================================================
        ID = 3 (******):    46.43   3.292     6.25    62.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0450
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)      (cu.m.)      (cms)        (m/s)       (min)
         0.05   441.45     .114E+03        0.0         0.27       55.89
         0.11   441.50     .457E+03        0.2         0.43       35.21
         0.16   441.56     .103E+04        0.6         0.57       26.87
         0.22   441.61     .185E+04        1.4         0.67       22.84
         0.27   441.67     .297E+04        2.5         0.77       19.84
         0.33   441.72     .437E+04        4.1         0.87       17.59
         0.38   441.78     .605E+04        6.4         0.96       15.85
         0.44   441.83     .802E+04        9.2         1.05       14.47
         0.49   441.89     .103E+05       12.8         1.14       13.35
         0.55   441.94     .128E+05       17.2         1.23       12.42
         0.60   442.00     .157E+05       22.4         1.31       11.63
         0.66   442.05     .188E+05       28.3         1.38       11.07
         0.71   442.11     .225E+05       36.9         1.50       10.16
         0.78   442.17     .277E+05       48.4         1.60        9.54
         0.84   442.24     .339E+05       61.9         1.67        9.13
         0.91   442.30     .412E+05       77.1         1.71        8.90
         0.97   442.36     .495E+05       94.7         1.75        8.71
         1.03   442.43     .589E+05      114.9         1.79        8.54
         1.10   442.49     .693E+05      137.9         1.82        8.38

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    46.43     3.29    6.25  62.55       0.30      0.81
   OUTFLOW: ID= 1 (******)    46.43     2.89    6.50  62.54       0.29      0.79


--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):     46.43      2.89      6.50    62.54
     ================================================
     ID= 2  (   2)    :     33.84      1.00      6.50    62.54
     ID= 3  (   2)    :     12.59      1.89      6.50    62.54
     ID= 4  (   2)    :      0.00      0.00      0.00     0.00
     ID= 5  (   2)    :      0.00      0.00      0.00     0.00
     ID= 6  (   2)    :      0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.038 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.263
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.605

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.038     6.00    51.26
      + ID2= 2 (******):    12.59   1.893     6.50    62.54
        ================================================
        ID = 3 (******):    12.81   1.902     6.50    62.35
```

```
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        433.07        0.0450
                 59.66        432.39        0.0450
                 94.25        432.03        0.0450
                115.71        431.82        0.0450
                143.84        431.84    0.0450 /0.0350  Main Channel
                163.59        431.75        0.0350      Main Channel
                177.84        431.73        0.0350      Main Channel
                199.51        431.70        0.0350      Main Channel
                231.74        431.53        0.0350      Main Channel
                283.71        431.44        0.0350      Main Channel
                294.09        431.43        0.0350      Main Channel
                325.65        431.42        0.0350      Main Channel
                355.24        431.24        0.0350      Main Channel
                383.70        431.43        0.0350      Main Channel
                476.17        432.06    0.0350 /0.0450  Main Channel
                510.88        432.23        0.0450
                558.61        432.37        0.0450
                589.84        432.57        0.0450
                622.97        432.73        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.08   431.32    .108E+03       0.3         0.30       6.68
      0.15   431.39    .434E+03       1.7         0.47       4.21
      0.23   431.47    .119E+04       5.0         0.50       3.99
      0.30   431.54    .252E+04      13.9         0.66       3.02
      0.38   431.62    .417E+04      29.3         0.84       2.37
      0.45   431.69    .604E+04      50.1         0.99       2.01
      0.53   431.77    .828E+04      73.9         1.06       1.87
      0.60   431.84    .109E+05     108.8         1.19       1.67
      0.68   431.92    .142E+05     159.5         1.34       1.48
      0.76   432.01    .176E+05     219.4         1.48       1.34
      0.84   432.09    .213E+05     290.0         1.62       1.22
      0.92   432.17    .252E+05     374.6         1.77       1.12
      1.01   432.25    .293E+05     469.2         1.91       1.04
      1.09   432.33    .338E+05     573.9         2.02       0.98
      1.17   432.41    .386E+05     689.9         2.13       0.93
      1.25   432.49    .435E+05     817.2         2.24       0.89
      1.33   432.57    .487E+05     955.3         2.34       0.85
      1.41   432.65    .541E+05    1103.5         2.43       0.82
      1.49   432.73    .597E+05    1262.7         2.52       0.79

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   12.81     1.90    6.50  62.35       0.15      0.47
   OUTFLOW: ID= 1 (******)   12.81     1.89    6.58  62.35       0.15      0.47


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     3.87   0.432     6.17    51.48
     + ID2= 2 (******):     0.45   0.078     6.00    51.26
       ==================================================
       ID = 3 (******):     4.32   0.486     6.17    51.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 3 (******):     4.32   0.486     6.17    51.46
     + ID2= 2 (******):    12.81   1.891     6.58    62.35
       ==================================================
       ID = 1 (******):    17.13   2.186     6.50    59.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        430.79        0.0450
                 23.82        429.79    0.0450 /0.0350  Main Channel
                 44.05        429.11        0.0350      Main Channel
                 70.46        428.15        0.0350      Main Channel
                112.31        427.60        0.0350      Main Channel
                150.77        427.27        0.0350      Main Channel
                179.17        427.15        0.0350      Main Channel
                214.90        427.16        0.0350      Main Channel
                261.89        427.25        0.0350      Main Channel
                317.65        427.56        0.0350      Main Channel
                382.75        427.99        0.0350      Main Channel
                394.40        428.11        0.0350      Main Channel
                432.80        428.07        0.0350      Main Channel
                432.91        428.07        0.0350      Main Channel
                462.57        428.15        0.0350      Main Channel
                522.90        429.79    0.0350 /0.0450  Main Channel
                585.04        429.90        0.0450
                731.92        430.62        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.18   427.33    .207E+04      11.5         0.73       2.99
      0.35   427.50    .570E+04      49.9         1.15       1.91
      0.53   427.68    .105E+05     119.2         1.49       1.47
      0.70   427.85    .163E+05     221.8         1.79       1.22
      0.88   428.03    .229E+05     360.8         2.06       1.06
      1.06   428.21    .312E+05     509.7         2.14       1.02
      1.23   428.38    .405E+05     771.0         2.49       0.88
      1.41   428.56    .500E+05    1076.3         2.82       0.77
      1.58   428.73    .598E+05    1423.8         3.12       0.70
      1.76   428.91    .699E+05    1812.5         3.40       0.64
      1.94   429.09    .802E+05    2241.5         3.66       0.60
      2.11   429.26    .907E+05    2709.1         3.91       0.56
      2.29   429.44    .102E+06    3215.8         4.15       0.53
      2.46   429.61    .113E+06    3761.6         4.38       0.50
      2.64   429.79    .124E+06    4346.4         4.59       0.48
      2.85   430.00    .139E+06    5173.9         4.88       0.45
      3.06   430.20    .156E+06    6075.9         5.12       0.43
      3.26   430.41    .173E+06    7054.9         5.33       0.41
      3.47   430.62    .193E+06    8114.3         5.52       0.40

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   17.13     2.19    6.50  59.60       0.03      0.73
   OUTFLOW: ID= 1 (******)   17.13     2.17    6.58  59.60       0.03      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.138 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.439
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.110 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.348
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.69   0.110     6.00    51.35
     + ID2= 2 (******):     0.97   0.138     6.08    51.44
       ==================================================
       ID = 3 (******):     1.66   0.248     6.08    51.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     1.66   0.248     6.08    51.40
     + ID2= 2 (******):    17.13   2.175     6.58    59.60
       ==================================================
       ID = 3 (******):    18.79   2.253     6.50    58.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  18.79      2.25      6.50   58.88
     ==================================================
     ID= 2  (   2)    :  18.79      2.25      6.50   58.88
     ID= 3  (   2)    :   0.00      0.00      6.50   58.88
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=       0.96          0.25
     Dep. Storage      (mm)=       2.00          4.48
     Average Slope      (%)=       0.64          0.54
     Length             (m)=      63.89        157.20
     Mannings n            =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=     111.66         83.83
                   over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.14 (ii)     5.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.30          0.05          0.347 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      82.74         51.50         76.17
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.61          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=       2.32          0.58
     Dep. Storage      (mm)=       2.00          4.48
     Average Slope      (%)=       0.70          0.60
     Length             (m)=     166.18        124.91
     Mannings n            =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=     111.66         83.83
                   over (min)        5.00         10.00
     Storage Coeff.  (min)=       3.69 (ii)     6.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.25          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.71          0.11          0.824 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      82.74         51.50         76.49
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.61          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     2.90   0.824     6.00    76.49
     + ID2= 2 (******):     1.21   0.347     6.00    76.17
       ==================================================
       ID = 3 (  0043):     4.11   1.171     6.00    76.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships
```

```
20809>
20810>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
20811>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
20812>        0.00     0.00     0.00     0.00     0.00     0.00
20813>        0.85     0.00     0.00     0.00     0.00     0.85
20814>        0.85     1.00     0.00     0.00     0.00     1.85
20815>        0.85   100.00     0.00     0.00     0.00   100.85
20816>
20817>                             AREA     QPEAK     TPEAK     R.V.
20818>                             (ha)     (cms)     (hrs)     (mm)
20819>      TOTAL HYD.(ID= 1):    4.11      1.17      6.00    76.40
20820>      ================================================
20821>      ID= 2  (   2)    :    3.84      0.85      6.00    76.40
20822>      ID= 3  (   2)    :    0.27      0.32      6.00    76.40
20823>      ID= 4  (   2)    :    0.00      0.00      0.00     0.00
20824>      ID= 5  (   2)    :    0.00      0.00      0.00     0.00
20825>      ID= 6  (   2)    :    0.00      0.00      0.00     0.00
20826> ---------------------------------------------------------------------------
20827>
20828> --------------------
20829> | ADD HYD  (******)|
20830> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
20831> --------------------          (ha)    (cms)    (hrs)     (mm)
20832>         ID1= 1 (******):     0.00    0.000     6.50    58.88
20833>       + ID2= 2 (******):     3.84    0.847     6.00    76.40
20834>         ================================================
20835>         ID = 3 (******):     3.84    0.847     6.00    76.40
20836>
20837>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20838> ---------------------------------------------------------------------------
20839> --------------------
20840> | DIVERTHYD(******)|
20841> | IN= 1   # OUT= 5 |
20842> --------------------
20843>      Outflow / Inflow  Relationships
20844>
20845>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
20846>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
20847>        0.00     0.00     0.00     0.00     0.00     0.00
20848>        0.00     5.20     0.00     0.00     0.00     5.20
20849>        1.00     5.20     0.00     0.00     0.00     6.20
20850>      100.00     5.20     0.00     0.00     0.00   105.20
20851>
20852>                             AREA     QPEAK     TPEAK     R.V.
20853>                             (ha)     (cms)     (hrs)     (mm)
20854>      TOTAL HYD.(ID= 1):    3.84      0.85      6.00    76.40
20855>      ================================================
20856>      ID= 2  (   2)    :    0.00      0.00      6.00    76.39
20857>      ID= 3  (   2)    :    3.84      0.85      6.00    76.39
20858>      ID= 4  (   2)    :    0.00      0.00      0.00     0.00
20859>      ID= 5  (   2)    :    0.00      0.00      0.00     0.00
20860>      ID= 6  (   2)    :    0.00      0.00      0.00     0.00
20861> ---------------------------------------------------------------------------
20862>
20863> --------------------
20864> | ADD HYD  (******)|
20865> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
20866> --------------------          (ha)    (cms)    (hrs)     (mm)
20867>         ID1= 1 (******):    18.79    2.253     6.50    58.88
20868>       + ID2= 2 (******):     0.00    0.000     6.00    76.39
20869>         ================================================
20870>         ID = 3 (******):    18.79    2.253     6.50    58.88
20871>
20872>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20873> ---------------------------------------------------------------------------
20874> --------------------
20875> | DIVERTHYD(******)|
20876> | IN= 1   # OUT= 5 |
20877> --------------------
20878>      Outflow / Inflow  Relationships
20879>
20880>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
20881>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
20882>        0.00     0.00     0.00     0.00     0.00     0.00
20883>        1.00     0.00     0.00     0.00     0.00     1.00
20884>      100.00     0.00     0.00     0.00     0.00   100.00
20885>
20886>                             AREA     QPEAK     TPEAK     R.V.
20887>                             (ha)     (cms)     (hrs)     (mm)
20888>      TOTAL HYD.(ID= 1):   18.79      2.25      6.50    58.88
20889>      ================================================
20890>      ID= 2  (   2)    :   18.79      2.25      6.50    58.88
20891>      ID= 3  (   2)    :    0.00      0.00      6.50    58.88
20892>      ID= 4  (   2)    :    0.00      0.00      0.00     0.00
20893>      ID= 5  (   2)    :    0.00      0.00      0.00     0.00
20894>      ID= 6  (   2)    :    0.00      0.00      0.00     0.00
20895> ---------------------------------------------------------------------------
20896> --------------------
20897> | DIVERTHYD(******)|
20898> | IN= 1   # OUT= 5 |
20899> --------------------
20900>      Outflow / Inflow  Relationships
20901>
20902>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
20903>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
20904>        0.00     0.00     0.00     0.00     0.00     0.00
20905>        0.00     0.00     0.00     0.00     0.00     0.00
20906>        0.01     0.00     0.00     0.00     0.00     0.01
20907>        0.06     0.00     0.00     0.00     0.00     0.06
20908>        0.08     0.00     0.00     0.00     0.00     0.08
20909>        0.12     0.00     0.00     0.00     0.00     0.12
20910>        0.20     0.00     0.00     0.00     0.00     0.20
20911>        0.25     0.00     0.00     0.00     0.00     0.25
20912>        0.30     0.00     0.00     0.00     0.00     0.30
20913>        0.33     0.00     0.00     0.00     0.00     0.33
20914>        0.37     0.00     0.00     0.00     0.00     0.37
20915>        0.39     0.00     0.00     0.00     0.00     0.39
20916>        0.42     1.43     0.00     0.00     0.00     1.85
20917>        0.44     8.83     0.00     0.00     0.00     9.27
20918>        0.47    25.03     0.00     0.00     0.00    25.50
20919>        0.49    52.11     0.00     0.00     0.00    52.61
20920>        0.52    91.81     0.00     0.00     0.00    92.33
20921>        0.53   126.04     0.00     0.00     0.00   126.57
20922>
20923>                             AREA     QPEAK     TPEAK     R.V.
20924>                             (ha)     (cms)     (hrs)     (mm)
20925>      TOTAL HYD.(ID= 1):   18.79      2.25      6.50    58.88
20926>      ================================================
20927>      ID= 2  (   2)    :    7.26      0.42      6.50    58.88
20928>      ID= 3  (   2)    :   11.53      1.83      6.50    58.88
20929>      ID= 4  (   2)    :    0.00      0.00      0.00     0.00
20930>      ID= 5  (   2)    :    0.00      0.00      0.00     0.00
20931>      ID= 6  (   2)    :    0.00      0.00      0.00     0.00
20932> ---------------------------------------------------------------------------
20933> --------------------
20934> | CALIB            |
20935> | STANDHYD (******)|   Area    (ha)=   0.82
20936> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
20937> --------------------
20938>                               IMPERVIOUS    PERVIOUS (i)
20939>      Surface Area     (ha)=       0.81         0.01
20940>      Dep. Storage     (mm)=       2.00         4.48
20941>      Average Slope     (%)=       0.50         1.00
20942>      Length            (m)=      18.40         0.00
20943>      Mannings n           =      0.013        0.030
20944>
20945>      Max.Eff.Inten.(mm/hr)=     111.66        83.83
20946>                    over (min)       5.00         5.00
20947>      Storage Coeff.  (min)=       1.09 (ii)    1.09 (ii)
20948>      Unit Hyd. Tpeak (min)=       5.00         5.00
20949>      Unit Hyd. peak  (cms)=       0.34         0.34
20950>                                                          *TOTALS*
20951>      PEAK FLOW       (cms)=       0.25         0.00          0.254 (iii)
20952>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
20953>      RUNOFF VOLUME    (mm)=      82.74        51.50          82.42
20954>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
20955>      RUNOFF COEFFICIENT   =       0.98         0.61           0.97
20956>
20957> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
20958>
20959>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20960>              CN*  =  85.0    Ia = Dep. Storage  (Above)
20961>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20962>            THAN THE STORAGE COEFFICIENT.
20963>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20964>
20965> ---------------------------------------------------------------------------
20966>
20967> --------------------
20968> | ADD HYD  (******)|
20969> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
20970> --------------------          (ha)    (cms)    (hrs)     (mm)
20971>         ID1= 1 (******):     0.82    0.254     6.00    82.42
20972>       + ID2= 2 (******):     0.00    0.000     6.50    58.88
20973>         ================================================
20974>         ID = 3 (******):     0.82    0.254     6.00    82.42
20975>
20976>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20977> ---------------------------------------------------------------------------
20978>
20979> --------------------
20980> | ADD HYD  (******)|
20981> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
20982> --------------------          (ha)    (cms)    (hrs)     (mm)
20983>         ID1= 3 (******):     0.82    0.254     6.00    82.42
20984>       + ID2= 2 (******):    11.53    1.834     6.50    58.88
20985>         ================================================
20986>         ID = 1 (******):    12.35    1.869     6.50    60.44
20987>
20988>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20989> ---------------------------------------------------------------------------
20990> --------------------
20991> | DIVERTHYD(******)|
20992> | IN= 1   # OUT= 5 |
20993> --------------------
20994>      Outflow / Inflow  Relationships
20995>
20996>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
20997>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
20998>        0.00     0.00     0.00     0.00     0.00     0.00
20999>        0.00     0.00     0.00     0.00     0.00     0.00
21000>        0.03     0.00     0.00     0.00     0.00     0.03
21001>        0.04     0.00     0.00     0.00     0.00     0.04
21002>        0.09     0.00     0.00     0.00     0.00     0.09
21003>        0.12     0.00     0.00     0.00     0.00     0.13
21004>        0.20     0.00     0.00     0.00     0.00     0.20
21005>        0.30     0.00     0.00     0.00     0.00     0.30
21006>        0.37     0.00     0.00     0.00     0.00     0.37
21007>        0.43     0.00     0.00     0.00     0.00     0.43
21008>        0.48     0.00     0.00     0.00     0.00     0.48
21009>        0.52     0.00     0.00     0.00     0.00     0.52
21010>        0.57     0.00     0.00     0.00     0.00     0.57
21011>        0.67     0.00     0.00     0.00     0.00     0.67
21012>        0.68     0.00     0.00     0.00     0.00     0.68
21013>        0.68     0.02     0.00     0.00     0.00     0.70
21014>        0.72     0.56     0.00     0.00     0.00     1.28
21015>        0.73     0.75     0.01     0.00     0.00     1.48
21016>        1.10     1.87     0.54     0.00     0.00     3.51
21017>        1.40     2.25     2.61     0.00     0.00     6.26
21018>
21019>                             AREA     QPEAK     TPEAK     R.V.
21020>                             (ha)     (cms)     (hrs)     (mm)
21021>      TOTAL HYD.(ID= 1):   12.35      1.87      6.50    60.44
21022>      ================================================
21023>      ID= 2  (   3)    :    7.65      0.80      6.50    60.44
21024>      ID= 3  (   3)    :    4.42      0.96      6.50    60.44
21025>      ID= 4  (   3)    :    0.27      0.11      6.50    60.44
21026>      ID= 5  (   3)    :    0.00      0.00      0.00     0.00
21027>      ID= 6  (   3)    :    0.00      0.00      0.00     0.00
21028> ---------------------------------------------------------------------------
21029>
21030> --------------------
21031> | ADD HYD  (******)|
21032> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
21033> --------------------          (ha)    (cms)    (hrs)     (mm)
21034>         ID1= 1 (******):     7.26    0.419     6.50    58.88
21035>       + ID2= 2 (******):     7.65    0.799     6.50    60.44
21036>         ================================================
21037>         ID = 3 (******):    14.92    1.218     6.50    59.68
21038>
21039>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21040> ---------------------------------------------------------------------------
21041> --------------------
21042> | CALIB            |
21043> | NASHYD   (******)|   Area     (ha)=  11.36   Curve Number   (CN)= 85.0
21044> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
21045> --------------------   U.H. Tp(hrs)=   0.33
21046>
21047>      Unit Hyd Qpeak  (cms)=   1.315
21048>
21049>      PEAK FLOW       (cms)=   1.267 (i)
21050>      TIME TO PEAK    (hrs)=   6.167
21051>      RUNOFF VOLUME    (mm)=  51.483
21052>      TOTAL RAINFALL   (mm)=  84.737
21053>      RUNOFF COEFFICIENT   =   0.608
21054>
21055>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21056>
21057> ---------------------------------------------------------------------------
21058> --------------------
21059> | CALIB            |
21060> | NASHYD   (******)|   Area     (ha)=   0.75   Curve Number   (CN)= 85.0
21061> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
21062> --------------------   U.H. Tp(hrs)=   0.22
21063>
21064>      Unit Hyd Qpeak  (cms)=   0.130
21065>
21066>      PEAK FLOW       (cms)=   0.110 (i)
21067>      TIME TO PEAK    (hrs)=   6.083
21068>      RUNOFF VOLUME    (mm)=  51.428
21069>      TOTAL RAINFALL   (mm)=  84.737
21070>      RUNOFF COEFFICIENT   =   0.607
21071>
21072>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21073>
21074> ---------------------------------------------------------------------------
21075> --------------------
21076> | CALIB            |
21077> | STANDHYD ( 40600)|   Area     (ha)=  78.37
21078> |ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
21079> --------------------
21080>                               IMPERVIOUS    PERVIOUS (i)
21081>      Surface Area     (ha)=      54.14        24.23
21082>      Dep. Storage     (mm)=       2.00         5.78
21083>      Average Slope     (%)=       1.20         1.20
21084>      Length            (m)=     722.82        47.00
21085>      Mannings n           =      0.015        0.260
21086>
21087>      Max.Eff.Inten.(mm/hr)=     111.66       116.51
21088>                    over (min)      10.00        20.00
21089>      Storage Coeff.  (min)=       8.26 (ii)   16.99 (ii)
21090>      Unit Hyd. Tpeak (min)=      10.00        20.00
21091>      Unit Hyd. peak  (cms)=       0.13         0.06
21092>                                                          *TOTALS*
21093>      PEAK FLOW       (cms)=      11.41         4.16         14.424 (iii)
21094>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
21095>      RUNOFF VOLUME    (mm)=      82.74        50.70         68.72
21096>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
21097>      RUNOFF COEFFICIENT   =       0.98         0.60          0.81
21098>
21099>
21100>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
21101>              CN*  =  79.0    Ia = Dep. Storage  (Above)
21102>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
21103>            THAN THE STORAGE COEFFICIENT.
21104>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21105>
21106> ---------------------------------------------------------------------------
21107> --------------------
21108> | ROUTE CHN( 60600)|
21109> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
21110> --------------------
21111>                <------ DATA FOR SECTION (   1.1) ------>
21112>                Distance      Elevation       Manning
21113>                    0.00         144.07        0.0450
21114>                    9.00         143.84        0.0450
```

```
                  12.00        142.90        0.0450
                  15.00        142.48        0.0450
                  18.00        142.43    0.0450 /0.0350  Main Channel
                  21.00        142.31        0.0350      Main Channel
                  24.00        142.12        0.0350      Main Channel
                  27.00        142.44    0.0350 /0.0450  Main Channel
                  30.00        142.71        0.0450
                  33.00        143.18        0.0450
                  36.00        143.27        0.0450
                  37.00        143.36        0.0450
                  38.00        143.64        0.0450
                  39.00        143.92        0.0450
                  40.00        143.93        0.0450
                  45.00        144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   142.20    .282E+02       0.0         0.24      26.26
        0.16   142.27    .113E+03       0.1         0.38      16.54
        0.23   142.35    .257E+03       0.3         0.48      13.09
        0.31   142.43    .477E+03       0.7         0.57      11.02
        0.42   142.54    .969E+03       2.0         0.76       8.24
        0.53   142.65    .157E+04       3.8         0.92       6.80
        0.64   142.76    .224E+04       6.3         1.06       5.90
        0.75   142.87    .299E+04       9.5         1.19       5.26
        0.86   142.98    .379E+04      13.2         1.31       4.77
        0.97   143.09    .463E+04      17.6         1.43       4.37
        1.08   143.20    .552E+04      22.5         1.53       4.09
        1.19   143.31    .653E+04      27.9         1.60       3.90
        1.30   143.42    .761E+04      34.4         1.70       3.69
        1.41   143.53    .874E+04      41.7         1.79       3.49
        1.52   143.64    .989E+04      49.7         1.89       3.32
        1.63   143.75    .111E+05      58.3         1.98       3.17
        1.74   143.85    .123E+05      66.9         2.04       3.06
        1.85   143.96    .137E+05      73.2         2.01       3.11
        1.96   144.07    .153E+05      81.5         2.00       3.13

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 40600)   78.37    14.42    6.00  68.72      0.89      1.34
   OUTFLOW: ID= 1 ( 60600)   78.37    13.97    6.08  68.72      0.88      1.33



--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area    (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75         2.18
     Dep. Storage     (mm)=       2.00         8.00
     Average Slope     (%)=       2.90         2.90
     Length            (m)=     162.03        40.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=     111.66        89.64
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.59 (ii)   10.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.39         0.36          0.704 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      82.74        43.65         56.01
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.52          0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40610):     3.94   0.704     6.00    56.01
     + ID2= 2 ( 60600):    78.37  13.972     6.08    68.72
       ================================================
       ID = 3 ( 50600):    82.31  14.434     6.08    68.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        143.40        0.0450
                  2.00        142.92        0.0450
                  4.00        142.14        0.0450
                  6.00        141.49        0.0450
                  8.00        141.11        0.0450
                 10.00        141.00    0.0450 /0.0350  Main Channel
                 12.00        140.98        0.0350      Main Channel
                 14.00        140.82        0.0350      Main Channel
                 16.00        141.02    0.0350 /0.0450  Main Channel
                 18.00        141.19        0.0450
                 20.00        141.19        0.0450
                 22.00        141.44        0.0450
                 24.00        142.00        0.0450
                 26.00        142.20        0.0450
                 28.00        142.39        0.0450
                 30.00        142.96        0.0450
                 31.00        143.13        0.0450
                 32.00        143.28        0.0450
                 33.00        143.41        0.0450
                 34.00        143.44        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   140.91    .314E+02       0.0         0.24      23.12
        0.18   141.00    .132E+03       0.1         0.31      17.83
        0.33   141.14    .502E+03       0.9         0.58       9.54
        0.47   141.29    .107E+04       2.4         0.74       7.47
        0.61   141.43    .175E+04       4.7         0.89       6.20
        0.75   141.57    .251E+04       7.9         1.05       5.31
        0.89   141.71    .332E+04      11.8         1.19       4.68
        1.03   141.85    .416E+04      16.5         1.32       4.21
        1.17   141.99    .506E+04      21.8         1.44       3.86
        1.31   142.13    .601E+04      27.5         1.52       3.64
        1.45   142.27    .705E+04      34.0         1.61       3.46
        1.59   142.41    .818E+04      41.5         1.69       3.29
        1.73   142.55    .936E+04      50.2         1.79       3.11
        1.88   142.69    .106E+05      59.8         1.88       2.95
        2.02   142.84    .118E+05      70.2         1.97       2.81
        2.16   142.98    .132E+05      81.2         2.06       2.70
        2.30   143.12    .145E+05      92.6         2.12       2.61
        2.44   143.26    .159E+05     104.8         2.19       2.54
        2.58   143.40    .174E+05     117.7         2.24       2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50600)   82.31    14.43    6.08  68.11      0.97      1.26
   OUTFLOW: ID= 1 ( 60610)   82.31    13.61    6.17  68.11      0.94      1.23



--------------------
| CALIB            |
| STANDHYD ( 40620)|   Area    (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30         1.37
     Dep. Storage     (mm)=       2.00         5.59
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     194.41        43.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     111.66       140.94
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.51 (ii)   10.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.06         0.36          1.383 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      82.74        53.82         71.36
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.64          0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40620):     5.67   1.383     6.00    71.36
     + ID2= 2 ( 60610):    82.31  13.608     6.17    68.11
       ================================================
       ID = 3 ( 50610):    87.98  14.137     6.17    68.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        142.03        0.0450
                  1.00        141.71        0.0450
                  2.00        141.35        0.0450
                  3.00        141.01        0.0450
                  4.00        140.79        0.0450
                  5.00        140.56        0.0450
                  6.00        140.44        0.0450
                  7.00        140.30    0.0450 /0.0350  Main Channel
                  8.00        140.08        0.0350      Main Channel
                  9.00        139.88        0.0350      Main Channel
                 10.00        139.97        0.0350      Main Channel
                 11.00        140.12        0.0350      Main Channel
                 12.00        140.35    0.0350 /0.0450  Main Channel
                 13.00        140.52        0.0450
                 14.00        140.73        0.0450
                 15.00        140.97        0.0450
                 16.00        141.27        0.0450
                 17.00        141.57        0.0450
                 18.00        141.89        0.0450
                 19.00        142.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02       0.0         0.36       8.21
        0.21   140.09    .579E+02       0.2         0.59       5.04
        0.31   140.19    .120E+03       0.5         0.78       3.79
        0.42   140.30    .200E+03       1.1         0.95       3.12
        0.53   140.41    .313E+03       2.1         1.18       2.51
        0.65   140.53    .456E+03       3.5         1.36       2.18
        0.76   140.65    .630E+03       5.3         1.50       1.98
        0.88   140.76    .826E+03       7.6         1.63       1.82
        0.99   140.88    .104E+04      10.3         1.75       1.69
        1.11   140.99    .128E+04      13.4         1.87       1.59
        1.23   141.11    .154E+04      17.1         1.98       1.50
        1.34   141.22    .180E+04      21.2         2.09       1.42
        1.46   141.34    .209E+04      25.8         2.20       1.35
        1.57   141.45    .239E+04      30.9         2.30       1.29
        1.69   141.57    .270E+04      36.4         2.40       1.24
        1.80   141.69    .303E+04      42.4         2.49       1.19
        1.92   141.80    .337E+04      48.9         2.58       1.15
        2.04   141.92    .373E+04      55.9         2.67       1.11
        2.15   142.03    .411E+04      63.2         2.74       1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98    14.14    6.17  68.32      1.13      1.89
   OUTFLOW: ID= 1 ( 60620)   87.98    14.29    6.17  68.32      1.14      1.89



--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=     111.66        88.00
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.52 (ii)   12.41 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.19          0.372 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      82.74        44.42         56.52
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.52          0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40640):     2.13   0.372     6.00    56.52
     + ID2= 2 ( 60620):    87.98  14.285     6.17    68.32
       ================================================
       ID = 3 ( 50630):    90.11  14.494     6.17    68.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
```

```
      Surface Area     (ha)=      13.13         7.40
      Dep. Storage     (mm)=       2.00         5.95
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     370.01        42.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=     111.66       106.00
                over (min)        5.00        15.00
      Storage Coeff.  (min)=       5.28 (ii)   13.55 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.21         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       3.23         1.33         4.398 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      82.74        49.43         66.97
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.58          0.79


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40630):    20.54   4.398     6.00    66.97
      + ID2= 2 ( 50630):    90.11  14.494     6.17    68.04
        ================================================
        ID = 3 ( 50640):   110.65  16.665     6.08    67.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.5060
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                             AREA     QPEAK     TPEAK       R.V.
                             (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50640)  110.646    16.665     6.08      67.84
   OUTFLOW: ID= 1 (******)  110.646     3.544     6.92      67.81
   OVERFLOW:ID= 3 (  0003)    0.000     0.000     0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.27
                  TIME SHIFT OF PEAK FLOW         (min)= 50.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  4.5456

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30651003) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651003)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):   110.65   3.544     6.92    67.81
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):   110.65   3.544     6.92    67.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):   110.65   3.544     6.92    67.81
      + ID2= 2 (******):     0.75   0.110     6.08    51.43
        ================================================
        ID = 1 (******):   111.40   3.559     6.92    67.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.36   1.267     6.17    51.48
      + ID2= 2 (******):   111.40   3.559     6.92    67.70
        ================================================
        ID = 3 (******):   122.76   4.094     6.67    66.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         447.10        0.0450
                  42.83         446.80        0.0450
                  42.89         446.80        0.0450
                  43.24         446.79        0.0450
                 122.57         446.48        0.0450
                 154.02         446.22        0.0450
                 191.79         446.32    0.0450 /0.0350  Main Channel
                 199.05         442.27        0.0350      Main Channel
                 199.74         442.33        0.0350      Main Channel
                 212.02         444.19        0.0350      Main Channel
                 232.17         444.54    0.0350 /0.0450  Main Channel
                 348.58         444.42        0.0450
                 359.23         444.30        0.0450
                 381.33         444.03        0.0450
                 483.65         444.18        0.0450
                 548.64         445.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.19   442.46    .184E+03       0.1         0.65       24.29
        0.38   442.65    .662E+03       0.7         1.01       15.64
        0.57   442.84    .143E+04       2.0         1.31       12.09
        0.76   443.03    .247E+04       4.1         1.57       10.05
        0.95   443.22    .381E+04       7.3         1.81        8.70
        1.14   443.41    .543E+04      11.7         2.04        7.73
        1.33   443.60    .733E+04      17.5         2.26        6.99
        1.52   443.79    .952E+04      24.8         2.46        6.41
        1.71   443.98    .120E+05      33.7         2.66        5.93
        1.89   444.16    .211E+05      47.0         2.11        7.49
        2.08   444.35    .469E+05      73.0         1.47       10.71
        2.27   444.54    .855E+05     117.6         1.30       12.12
        2.46   444.73    .140E+06     240.0         1.62        9.75
        2.65   444.92    .197E+06     400.4         1.92        8.20
        2.84   445.11    .255E+06     595.0         2.21        7.13
        3.03   445.30    .314E+06     821.8         2.48        6.37
        3.22   445.49    .374E+06    1079.2         2.73        5.78
        3.41   445.68    .436E+06    1366.3         2.96        5.32
        3.60   445.87    .500E+06    1682.3         3.19        4.95


                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  122.76     4.09    6.67  66.20      0.76      1.57
   OUTFLOW: ID= 1 (******)  122.76     3.99    6.83  66.20      0.74      1.55


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.070 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.376
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.45   0.070     6.08    51.38
      + ID2= 2 (******):   122.76   3.990     6.83    66.20
        ================================================
        ID = 3 (******):   123.21   4.000     6.83    66.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.277 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.466
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.39   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.083

     PEAK FLOW       (cms)=   0.062 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.348
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.39   0.062     6.00    51.35
      + ID2= 2 (******):     2.19   0.277     6.08    51.47
        ================================================
        ID = 3 (******):     2.58   0.339     6.08    51.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.58   0.339     6.08    51.45
      + ID2= 2 (******):   123.21   4.000     6.83    66.14
        ================================================
        ID = 1 (******):   125.79   4.076     6.83    65.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         429.12        0.0450
                  37.54         428.86        0.0450
                  53.31         428.70        0.0450
                  81.17         428.24        0.0450
                  99.28         428.15    0.0450 /0.0350  Main Channel
                 114.53         427.72        0.0350      Main Channel
                 119.88         426.51        0.0350      Main Channel
                 124.17         425.84        0.0350      Main Channel
                 206.01         425.90        0.0350      Main Channel
                 209.64         426.51        0.0350      Main Channel
                 214.21         426.89        0.0350      Main Channel
                 231.49         427.17        0.0350      Main Channel
                 268.61         427.89    0.0350 /0.0450  Main Channel
                 351.58         428.15        0.0450
                 368.27         428.31        0.0450
                 405.75         428.52        0.0450
                 416.79         428.59        0.0450
                 440.06         428.76        0.0450
                 469.88         428.97        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   426.00    .218E+04       4.1         0.39        8.87
        0.31   426.16    .495E+04      15.8         0.67        5.22
        0.47   426.32    .779E+04      33.2         0.89        3.92
        0.63   426.47    .107E+05      55.4         1.08        3.22
        0.79   426.63    .137E+05      81.8         1.25        2.78
        0.94   426.79    .167E+05     112.4         1.40        2.48
        1.10   426.95    .199E+05     144.6         1.52        2.29
        1.26   427.10    .233E+05     176.4         1.58        2.20
        1.42   427.26    .271E+05     214.5         1.65        2.11
        1.57   427.42    .312E+05     258.4         1.73        2.01
        1.73   427.58    .356E+05     307.7         1.81        1.93
        1.89   427.73    .402E+05     362.0         1.88        1.85
        2.05   427.89    .452E+05     415.1         1.91        1.82
        2.23   428.07    .525E+05     501.3         1.99        1.74
        2.41   428.25    .621E+05     609.1         2.05        1.70
        2.59   428.43    .733E+05     739.1         2.10        1.65
        2.77   428.61    .862E+05     886.8         2.15        1.62
```

```
        2.95   428.79    .101E+06    1053.9          2.19       1.59
        3.13   428.97    .116E+06    1240.2          2.22       1.57

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  125.79     4.08    6.83  65.84      0.16      0.39
   OUTFLOW: ID= 1 (******)  125.79     3.97    7.00  65.84      0.15      0.39



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.314 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.473
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0000
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.05   441.45    .216E+02       0.0         0.17       16.51
        0.11   441.50    .864E+02       0.1         0.28       10.40
        0.16   441.56    .194E+03       0.4         0.36        7.94
        0.22   441.61    .350E+03       0.9         0.43        6.75
        0.27   441.67    .561E+03       1.6         0.49        5.86
        0.33   441.72    .825E+03       2.6         0.55        5.20
        0.38   441.78    .114E+04       4.1         0.62        4.68
        0.44   441.83    .152E+04       5.9         0.67        4.27
        0.49   441.89    .194E+04       8.2         0.73        3.94
        0.55   441.94    .242E+04      11.0         0.79        3.67
        0.60   442.00    .296E+04      14.3         0.84        3.44
        0.66   442.05    .355E+04      18.1         0.88        3.27
        0.71   442.11    .425E+04      23.6         0.96        3.00
        0.78   442.17    .523E+04      31.0         1.02        2.82
        0.84   442.24    .641E+04      39.6         1.07        2.70
        0.91   442.30    .778E+04      49.3         1.10        2.63
        0.97   442.36    .935E+04      60.5         1.12        2.57
        1.03   442.43    .111E+05      73.5         1.14        2.52
        1.10   442.49    .131E+05      88.2         1.16        2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   33.84     1.00    6.50  62.54      0.23      0.44
   OUTFLOW: ID= 1 (******)   33.84     1.00    7.00  62.54      0.23      0.44



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.374 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  51.493
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     4.24    0.374     6.33    51.49
     + ID2= 2 (******):    33.84    1.000     7.00    62.54
       ================================================
       ID = 3 (******):    38.08    1.369     6.33    61.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     2.59    0.314     6.17    51.47
     + ID2= 2 (******):    38.08    1.369     6.33    61.31
       ================================================
       ID = 3 (******):    40.67    1.648     6.25    60.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        429.12        0.0500
                   37.54        428.86        0.0500
                   53.31        428.70        0.0500
                   81.17        428.24        0.0500
                   99.28        428.15    0.0500 /0.0300  Main Channel
                  114.53        427.72        0.0300      Main Channel
                  119.88        426.51        0.0300      Main Channel
                  124.17        425.84        0.0300      Main Channel
                  206.01        425.90        0.0300      Main Channel
                  209.64        426.51        0.0300      Main Channel
                  214.21        426.89        0.0300      Main Channel
                  231.49        427.17        0.0300      Main Channel
                  268.61        427.89    0.0300 /0.0500  Main Channel
                  351.58        428.15        0.0500
                  368.27        428.31        0.0500
                  405.75        428.52        0.0500
                  416.79        428.59        0.0500
                  440.06        428.76        0.0500
                  469.88        428.97        0.0500

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   426.00    .187E+04       9.2         0.88        3.40
        0.31   426.16    .424E+04      35.4         1.49        2.00
        0.47   426.32    .666E+04      74.1         1.98        1.50
        0.63   426.47    .914E+04     123.7         2.41        1.23
        0.79   426.63    .117E+05     182.8         2.79        1.07
        0.94   426.79    .143E+05     251.2         3.13        0.95
        1.10   426.95    .170E+05     323.1         3.39        0.88
        1.26   427.10    .199E+05     394.0         3.52        0.84
        1.42   427.26    .232E+05     479.1         3.69        0.81
        1.57   427.42    .267E+05     577.3         3.86        0.77
        1.73   427.58    .304E+05     687.4         4.03        0.74
        1.89   427.73    .344E+05     808.6         4.20        0.71
        2.05   427.89    .387E+05     927.4         4.28        0.70
        2.23   428.07    .449E+05    1119.2         4.45        0.67
        2.41   428.25    .531E+05    1356.2         4.56        0.65
        2.59   428.43    .627E+05    1638.9         4.66        0.64
        2.77   428.61    .737E+05    1955.8         4.73        0.63
        2.95   428.79    .859E+05    2310.2         4.79        0.62
        3.13   428.97    .996E+05    2701.5         4.84        0.61

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   40.67     1.65    6.25  60.69      0.03      0.88
   OUTFLOW: ID= 1 (******)   40.67     1.63    6.33  60.69      0.03      0.88



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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):   125.79    3.969     7.00    65.84
     + ID2= 2 (******):    40.67    1.635     6.33    60.69
       ================================================
       ID = 3 (******):   166.46    5.250     6.92    64.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.98          3.60
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.91          1.12
     Length            (m)=     246.54        157.18
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=     111.66         51.15
                   over (min)      5.00         35.00
     Storage Coeff.  (min)=       4.71 (ii)    32.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00         35.00
     Unit Hyd. peak  (cms)=       0.22          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.50          0.30          1.639 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.42          6.00
     RUNOFF VOLUME    (mm)=      82.74         51.50         69.61
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.61          0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     8.58    1.639     6.00    69.61
     + ID2= 2 (******):    14.92    1.218     6.50    59.68
       ================================================
       ID = 3 ( 50650):    23.50    2.556     6.00    63.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 3 ( 50650):    23.50    2.556     6.00    63.31
     + ID2= 2 (******):   166.46    5.250     6.92    64.58
       ================================================
       ID = 1 ( 50650):   189.95    6.678     6.83    64.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        129.45        0.0450
                    6.00        129.24        0.0450
                    8.00        128.92        0.0450
                   10.00        128.26        0.0450
                   12.00        127.37        0.0450
                   14.00        126.79        0.0450
                   16.00        126.20        0.0450
                   18.00        125.80        0.0450
                   21.00        125.29        0.0450
                   24.00        124.85        0.0450
                   27.00        124.54        0.0350      Main Channel
                   30.00        124.62        0.0350      Main Channel
                   33.00        124.84    0.0350 /0.0450  Main Channel
                   36.00        125.26        0.0450
                   39.00        125.86        0.0450
                   42.00        126.49        0.0450
                   48.00        128.97        0.0450
                   54.00        129.42        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.26   124.80    .390E+03       0.9         0.76        7.18
        0.51   125.06    .124E+04       4.9         1.29        4.21
        0.77   125.31    .239E+04      12.3         1.67        3.25
        1.03   125.57    .380E+04      23.2         1.99        2.73
        1.28   125.83    .544E+04      37.9         2.27        2.40
        1.54   126.08    .731E+04      56.6         2.52        2.15
        1.80   126.34    .937E+04      79.6         2.77        1.96
        2.05   126.60    .116E+05     107.2         3.01        1.81
        2.31   126.85    .140E+05     139.3         3.25        1.67
        2.57   127.11    .165E+05     175.4         3.47        1.57
        2.82   127.37    .191E+05     215.7         3.68        1.48
        3.08   127.62    .219E+05     261.1         3.89        1.39
        3.34   127.88    .247E+05     310.7         4.10        1.32
        3.59   128.14    .276E+05     364.3         4.30        1.26
        3.85   128.40    .307E+05     421.6         4.48        1.21
        4.11   128.65    .338E+05     482.7         4.65        1.17
        4.36   128.91    .371E+05     548.1         4.82        1.13
        4.62   129.17    .406E+05     600.9         4.83        1.13
        4.88   129.42    .446E+05     634.1         4.63        1.17

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50650)  189.95     6.68    6.83  64.42      0.58      1.37
   OUTFLOW: ID= 1 ( 60650)  189.95     6.67    6.92  64.42      0.57      1.36
```

```
22033>
22034>
22035> ------------------------------------------------------------------------------
22036> --------------------
22037> | CALIB            |
22038> | STANDHYD ( 40670)|   Area    (ha)=  50.76
22039> |ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
22040> --------------------
22041>                              IMPERVIOUS    PERVIOUS (i)
22042>      Surface Area     (ha)=      37.06        13.71
22043>      Dep. Storage     (mm)=       2.00         6.10
22044>      Average Slope     (%)=       1.50         1.50
22045>      Length            (m)=     581.73        82.00
22046>      Mannings n           =      0.015        0.280
22047>
22048>      Max.Eff.Inten.(mm/hr)=     111.66        71.03
22049>                 over (min)        5.00        25.00
22050>      Storage Coeff.  (min)=       6.78 (ii)   21.31 (ii)
22051>      Unit Hyd. Tpeak (min)=       5.00        25.00
22052>      Unit Hyd. peak  (cms)=       0.18         0.05
22053>                                                      *TOTALS*
22054>      PEAK FLOW       (cms)=      10.51         1.29        11.278 (iii)
22055>      TIME TO PEAK    (hrs)=       6.00         6.25         6.00
22056>      RUNOFF VOLUME    (mm)=      82.74        43.79        71.83
22057>      TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
22058>      RUNOFF COEFFICIENT   =       0.98         0.52         0.85
22059>
22060>
22061>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22062>             CN*  =  79.5    Ia = Dep. Storage  (Above)
22063>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22064>            THAN THE STORAGE COEFFICIENT.
22065>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22066>
22067> ------------------------------------------------------------------------------
22068>
22069> --------------------
22070> | ADD HYD  ( 50670)|
22071> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22072> --------------------         (ha)    (cms)    (hrs)     (mm)
22073>        ID1= 1 ( 40670):    50.76  11.278     6.00    71.83
22074>      + ID2= 2 ( 60650):   189.95   6.672     6.92    64.42
22075>        ================================================
22076>        ID = 3 ( 50670):   240.71  15.051     6.00    65.99
22077>
22078>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22079> ------------------------------------------------------------------------------
22080> --------------------
22081> | ROUTE CHN( 60670)|
22082> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
22083> --------------------
22084>               <------ DATA FOR SECTION (   1.1) ------>
22085>               Distance      Elevation       Manning
22086>                   0.00        115.77        0.0450
22087>                  20.00        115.51        0.0450
22088>                  24.00        114.73        0.0450
22089>                  28.00        113.17    0.0450 /0.0350  Main Channel
22090>                  32.00        113.16    0.0350 /0.0450  Main Channel
22091>                  36.00        114.68        0.0450
22092>                  40.00        115.05        0.0450
22093>                  44.00        115.27        0.0450
22094>                  48.00        115.46        0.0450
22095>                  52.00        115.71        0.0450
22096>                  54.00        115.77        0.0450
22097>
22098>       <---------------------- TRAVEL TIME TABLE ----------------------->
22099>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
22100>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
22101>         0.14   113.30    .275E+03        0.3         0.60      13.60
22102>         0.27   113.43    .612E+03        1.2         0.93       8.76
22103>         0.41   113.57    .996E+03        2.4         1.18       6.88
22104>         0.55   113.71    .143E+04        4.1         1.39       5.85
22105>         0.69   113.84    .191E+04        6.1         1.57       5.18
22106>         0.82   113.98    .244E+04        8.6         1.73       4.70
22107>         0.96   114.12    .301E+04       11.6         1.87       4.34
22108>         1.10   114.26    .363E+04       14.9         2.00       4.06
22109>         1.24   114.39    .430E+04       18.8         2.12       3.82
22110>         1.37   114.53    .502E+04       23.1         2.24       3.63
22111>         1.51   114.67    .579E+04       27.9         2.34       3.46
22112>         1.65   114.81    .664E+04       32.5         2.38       3.41
22113>         1.78   114.94    .763E+04       37.8         2.41       3.36
22114>         1.92   115.08    .878E+04       44.0         2.44       3.33
22115>         2.06   115.22    .101E+05       50.8         2.45       3.31
22116>         2.20   115.35    .117E+05       58.8         2.46       3.30
22117>         2.33   115.49    .134E+05       68.1         2.47       3.29
22118>         2.47   115.63    .157E+05       74.2         2.30       3.53
22119>         2.61   115.77    .188E+05       85.0         2.20       3.69
22120>
22121>                                    <---- hydrograph ---->   <-pipe / channel->
22122>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
22123>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
22124>    INFLOW : ID= 2 ( 50670)  240.71    15.05    6.00  65.99      1.10      2.00
22125>    OUTFLOW: ID= 1 ( 60670)  240.71    13.63    6.00  65.99      1.04      1.95
22126>
22127>
22128>
22129> ------------------------------------------------------------------------------
22130> --------------------
22131> | CALIB            |
22132> | STANDHYD ( 40700)|   Area    (ha)=  10.86
22133> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
22134> --------------------
22135>                              IMPERVIOUS    PERVIOUS (i)
22136>      Surface Area     (ha)=       6.22         4.63
22137>      Dep. Storage     (mm)=       2.00         8.04
22138>      Average Slope     (%)=       2.30         2.30
22139>      Length            (m)=     269.03        47.00
22140>      Mannings n           =      0.015        0.350
22141>
22142>      Max.Eff.Inten.(mm/hr)=     111.66        73.45
22143>                 over (min)        5.00        15.00
22144>      Storage Coeff.  (min)=       3.76 (ii)   14.08 (ii)
22145>      Unit Hyd. Tpeak (min)=       5.00        15.00
22146>      Unit Hyd. peak  (cms)=       0.25         0.08
22147>                                                      *TOTALS*
22148>      PEAK FLOW       (cms)=       1.83         0.59         2.344 (iii)
22149>      TIME TO PEAK    (hrs)=       6.00         6.08         6.00
22150>      RUNOFF VOLUME    (mm)=      82.74        44.09        65.39
22151>      TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
22152>      RUNOFF COEFFICIENT   =       0.98         0.52         0.77
22153>
22154> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
22155>
22156>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22157>             CN*  =  80.7    Ia = Dep. Storage  (Above)
22158>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22159>            THAN THE STORAGE COEFFICIENT.
22160>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22161>
22162> ------------------------------------------------------------------------------
22163>
22164> --------------------
22165> | ADD HYD  ( 50680)|
22166> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22167> --------------------         (ha)    (cms)    (hrs)     (mm)
22168>        ID1= 1 ( 40700):    10.86   2.344     6.00    65.39
22169>      + ID2= 2 ( 60670):   240.71  13.631     6.00    65.99
22170>        ================================================
22171>        ID = 3 ( 50680):   251.57  15.975     6.00    65.96
22172>
22173>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22174> ------------------------------------------------------------------------------
22175> --------------------
22176> | CALIB            |
22177> | STANDHYD ( 40680)|   Area    (ha)=   1.20
22178> |ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
22179> --------------------
22180>                              IMPERVIOUS    PERVIOUS (i)
22181>      Surface Area     (ha)=       0.50         0.69
22182>      Dep. Storage     (mm)=       2.00         7.98
22183>      Average Slope     (%)=       0.60         0.60
22184>      Length            (m)=      89.27        69.00
22185>      Mannings n           =      0.015        0.350
22186>
22187>      Max.Eff.Inten.(mm/hr)=     111.66        50.80
22188>                 over (min)        5.00        30.00
22189>      Storage Coeff.  (min)=       2.90 (ii)   25.44 (ii)
22190>      Unit Hyd. Tpeak (min)=       5.00        30.00
22191>      Unit Hyd. peak  (cms)=       0.28         0.04
22192>                                                      *TOTALS*
22193>      PEAK FLOW       (cms)=       0.14         0.06         0.173 (iii)
22194>      TIME TO PEAK    (hrs)=       6.00         6.33         6.00
22195>      RUNOFF VOLUME    (mm)=      82.74        43.34        58.66
22196>      TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
22197>      RUNOFF COEFFICIENT   =       0.98         0.51         0.69
22198>
22199> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
22200>
22201>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22202>             CN*  =  80.0    Ia = Dep. Storage  (Above)
22203>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22204>            THAN THE STORAGE COEFFICIENT.
22205>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22206>
22207> ------------------------------------------------------------------------------
22208> --------------------
22209> | CALIB            |
22210> | STANDHYD ( 40690)|   Area    (ha)=  25.49
22211> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
22212> --------------------
22213>                              IMPERVIOUS    PERVIOUS (i)
22214>      Surface Area     (ha)=       7.93        17.56
22215>      Dep. Storage     (mm)=       2.00         8.01
22216>      Average Slope     (%)=       3.10         3.10
22217>      Length            (m)=     412.26        40.00
22218>      Mannings n           =      0.015        0.350
22219>
22220>      Max.Eff.Inten.(mm/hr)=     111.66        73.57
22221>                 over (min)        5.00        15.00
22222>      Storage Coeff.  (min)=       4.44 (ii)   13.00 (ii)
22223>      Unit Hyd. Tpeak (min)=       5.00        15.00
22224>      Unit Hyd. peak  (cms)=       0.23         0.08
22225>                                                      *TOTALS*
22226>      PEAK FLOW       (cms)=       2.13         2.17         4.006 (iii)
22227>      TIME TO PEAK    (hrs)=       6.00         6.08         6.00
22228>      RUNOFF VOLUME    (mm)=      82.74        41.58        52.90
22229>      TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
22230>      RUNOFF COEFFICIENT   =       0.98         0.49         0.62
22231>
22232> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
22233>
22234>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22235>             CN*  =  78.5    Ia = Dep. Storage  (Above)
22236>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22237>            THAN THE STORAGE COEFFICIENT.
22238>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22239>
22240> ------------------------------------------------------------------------------
22241>
22242> --------------------
22243> | ADD HYD  ( 50690)|
22244> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22245> --------------------         (ha)    (cms)    (hrs)     (mm)
22246>        ID1= 1 ( 40680):     1.20   0.173     6.00    58.66
22247>      + ID2= 2 ( 40690):    25.49   4.006     6.00    52.90
22248>        ================================================
22249>        ID = 3 ( 50690):    26.69   4.180     6.00    53.15
22250>
22251>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22252> ------------------------------------------------------------------------------
22253>
22254> --------------------
22255> | ADD HYD  ( 50700)|
22256> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22257> --------------------         (ha)    (cms)    (hrs)     (mm)
22258>        ID1= 1 ( 50680):   251.57  15.975     6.00    65.96
22259>      + ID2= 2 ( 50690):    26.69   4.180     6.00    53.15
22260>        ================================================
22261>        ID = 3 ( 50700):   278.26  20.155     6.00    64.73
22262>
22263>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22264> ------------------------------------------------------------------------------
22265> --------------------
22266> | ROUTE CHN( 60700)|
22267> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
22268> --------------------
22269>               <------ DATA FOR SECTION (   1.1) ------>
22270>               Distance      Elevation       Manning
22271>                   0.00        109.54        0.0450
22272>                   4.00        108.85        0.0450
22273>                   8.00        108.76        0.0450
22274>                  12.00        108.31        0.0450
22275>                  16.00        107.44        0.0450
22276>                  20.00        107.22        0.0450
22277>                  24.00        107.06        0.0450
22278>                  28.00        107.10        0.0450
22279>                  32.00        107.04        0.0450
22280>                  36.00        106.98        0.0450
22281>                  40.00        106.83        0.0350      Main Channel
22282>                  44.00        106.49        0.0350      Main Channel
22283>                  48.00        106.92    0.0350 /0.0450  Main Channel
22284>                  52.00        107.19        0.0450
22285>                  56.00        107.11        0.0450
22286>                  60.00        107.14        0.0450
22287>                  64.00        107.27        0.0450
22288>                  68.00        107.71        0.0450
22289>                  72.00        108.37        0.0450
22290>                  80.00        109.55        0.0450
22291>
22292>       <---------------------- TRAVEL TIME TABLE ----------------------->
22293>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
22294>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
22295>         0.12   106.60    .128E+03        0.1         0.43      35.47
22296>         0.23   106.72    .513E+03        0.4         0.69      22.34
22297>         0.35   106.83    .115E+04        1.1         0.90      17.05
22298>         0.52   107.00    .277E+04        3.6         1.21      12.69
22299>         0.69   107.17    .675E+04        8.9         1.21      12.64
22300>         0.86   107.34    .135E+05       19.9         1.35      11.35
22301>         1.02   107.51    .211E+05       36.3         1.58       9.70
22302>         1.19   107.68    .291E+05       57.8         1.82       8.39
22303>         1.36   107.85    .375E+05       84.0         2.06       7.43
22304>         1.53   108.02    .461E+05      114.5         2.28       6.71
22305>         1.70   108.19    .550E+05      149.1         2.49       6.15
22306>         1.87   108.35    .642E+05      187.4         2.68       5.71
22307>         2.04   108.52    .737E+05      228.8         2.85       5.37
22308>         2.21   108.69    .837E+05      274.1         3.01       5.09
22309>         2.37   108.86    .942E+05      316.2         3.08       4.97
22310>         2.54   109.03    .105E+06      372.6         3.25       4.72
22311>         2.71   109.20    .117E+06      433.4         3.40       4.50
22312>         2.88   109.37    .129E+06      498.6         3.55       4.31
22313>         3.05   109.54    .141E+06      568.2         3.70       4.14
22314>
22315>                                    <---- hydrograph ---->   <-pipe / channel->
22316>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
22317>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
22318>    INFLOW : ID= 2 ( 50700)  278.26    20.15    6.00  64.73      0.86      1.35
22319>    OUTFLOW: ID= 1 ( 60700)  278.26    14.97    6.17  64.73      0.78      1.28
22320>
22321>
22322>
22323> ------------------------------------------------------------------------------
22324> --------------------
22325> | CALIB            |
22326> | STANDHYD ( 40710)|   Area    (ha)=   6.35
22327> |ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
22328> --------------------
22329>                              IMPERVIOUS    PERVIOUS (i)
22330>      Surface Area     (ha)=       1.57         4.79
22331>      Dep. Storage     (mm)=       2.00         8.94
22332>      Average Slope     (%)=       3.90         3.90
22333>      Length            (m)=     205.82        41.00
22334>      Mannings n           =      0.015        0.360
22335>
22336>      Max.Eff.Inten.(mm/hr)=     111.66        74.67
22337>                 over (min)        5.00        15.00
22338>      Storage Coeff.  (min)=       2.73 (ii)   10.93 (ii)
```

```
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.29         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.41         0.64          0.971 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      82.74        41.93         50.39
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.49          0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.971     6.00    50.39
      + ID2= 2 ( 60700):   278.26  14.974     6.17    64.73
        ====================================================
        ID = 3 ( 50710):   284.61  15.640     6.17    64.41

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.12         3.92
      Dep. Storage     (mm)=       2.00         5.64
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     408.55        40.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=     111.66        77.53
                    over (min)       5.00        10.00
      Storage Coeff.  (min)=       4.46 (ii)    7.66 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.23         0.13
                                                          *TOTALS*
      PEAK FLOW       (cms)=       6.35         0.67          7.018 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
      RUNOFF VOLUME    (mm)=      82.74        44.98         76.57
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.53          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    0.7080      1.0040
                         0.2890      0.3890   |    0.7750      1.0700
                         0.3270      0.4500   |    0.9210      1.2580
                         0.3600      0.6030   |    1.0000      1.3280
                         0.3900      0.6540   |    1.0820      1.3980
                         0.4190      0.7110   |    1.1670      1.4690
                         0.4450      0.7680   |    1.2550      1.5390
                         0.4700      0.8260   |    1.3460      1.6090
                         0.4960      0.8830   |    1.9470      1.9930
                         0.6450      0.9400   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)   25.037     7.018      6.00      76.57
   OUTFLOW: ID= 1 ( 70150)   25.037     0.825      6.58      76.55
   OVERFLOW:ID= 3 (  0003)    0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.75
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.1362

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  --------------------------
  | Junction Command(70151) |
  --------------------------
                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.76         3.40
      Dep. Storage     (mm)=       2.00         6.50
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     307.19        41.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     111.66        74.41
                    over (min)       5.00        10.00
      Storage Coeff.  (min)=       3.72 (ii)    7.88 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.25         0.13
                                                          *TOTALS*
      PEAK FLOW       (cms)=       3.26         0.55          3.801 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
      RUNOFF VOLUME    (mm)=      82.74        42.95         72.79
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.51          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    0.2230      0.3310
                         0.0580      0.0840   |    0.2500      0.3590
                         0.0780      0.1040   |    0.2790      0.3870
                         0.0930      0.1240   |    0.3090      0.4160
                         0.1060      0.1440   |    0.3750      0.4780
                         0.1180      0.1640   |    0.4110      0.5120
                         0.1280      0.1840   |    0.4470      0.5450
                         0.1590      0.2550   |    0.5250      0.6130
                         0.1770      0.2790   |    0.7390      0.9130
                         0.1990      0.3030   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)   14.155     3.801      6.00      72.79
   OUTFLOW: ID= 1 ( 70160)   14.155     0.504      6.50      72.76
   OVERFLOW:ID= 3 (  0003)    0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.25
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5954

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  --------------------------
  | Junction Command(70161) |
  --------------------------
                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   284.61  15.640     6.17    64.41
      + ID2= 2 ( 70150):    25.04   0.825     6.58    76.55
        ====================================================
        ID = 3 ( 50730):   309.65  16.423     6.17    65.39

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   309.65  16.423     6.17    65.39
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 1 ( 50730):   309.65  16.423     6.17    65.39

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50730):   309.65  16.423     6.17    65.39
      + ID2= 2 ( 70160):    14.15   0.504     6.50    72.76
        ====================================================
        ID = 3 ( 50730):   323.81  16.902     6.17    65.72

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   323.81  16.902     6.17    65.72
      + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 1 ( 50730):   323.81  16.902     6.17    65.72

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         96.28        0.0450
                   9.00         95.39        0.0450
                  12.00         94.87        0.0450
                  15.00         94.17        0.0450
                  18.00         93.95        0.0450
                  21.00         94.01        0.0450
                  24.00         93.92        0.0450
                  27.00         93.98    0.0450 /0.0350  Main Channel
                  30.00         93.33        0.0350      Main Channel
                  32.00         93.73    0.0350 /0.0450  Main Channel
                  34.00         94.58        0.0450
                  35.00         95.06        0.0450
                  40.00         95.32        0.0450
                  45.00         96.12        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.46    .164E+03       0.0         0.36       89.51
        0.26   93.60    .654E+03       0.2         0.57       56.39
        0.40   93.73    .147E+04       0.6         0.75       43.03
        0.55   93.88    .274E+04       1.4         0.99       32.63
        0.70   94.03    .550E+04       2.8         1.00       32.28
        0.85   94.18    .104E+05       5.8         1.08       29.94
        1.00   94.33    .159E+05      10.1         1.24       26.04
        1.15   94.48    .216E+05      15.6         1.41       22.97
        1.29   94.63    .275E+05      22.2         1.57       20.64
        1.44   94.78    .338E+05      29.9         1.72       18.84
        1.59   94.93    .404E+05      38.6         1.86       17.44
        1.74   95.08    .473E+05      48.0         1.97       16.40
        1.89   95.23    .549E+05      58.1         2.05       15.76
        2.04   95.38    .637E+05      70.1         2.14       15.14
        2.19   95.53    .731E+05      83.0         2.21       14.67
        2.34   95.68    .833E+05      97.5         2.27       14.23
        2.49   95.83    .941E+05     113.5         2.34       13.82
        2.64   95.98    .106E+06     131.2         2.41       13.42
        2.79   96.13    .118E+06     150.7         2.48       13.05

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  323.81    16.90    6.17  65.72      1.17      1.44
   OUTFLOW: ID= 1 ( 60730)  323.81    12.43    6.50  65.71      1.06      1.31


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      56.24        13.19
      Dep. Storage     (mm)=       2.00         5.50
      Average Slope     (%)=       1.70         1.70
      Length            (m)=     680.34        43.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=     111.66        77.42
                    over (min)       5.00        15.00
      Storage Coeff.  (min)=       7.18 (ii)   11.54 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.17         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=      15.80         1.83         17.408 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      82.74        44.61         75.11
```

```
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.53           0.89


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)     69.429    17.408      6.00      75.11
   OUTFLOW: ID= 1 ( 70170)     69.429     2.172      6.58      75.09
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.48
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  3.3862

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  --------------------------
  | Junction Command(70171) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 60730):   323.81  12.433     6.50    65.71
      + ID2= 2 ( 70170):    69.43   2.172     6.58    75.09
        ================================================
        ID = 3 ( 50770):   393.23  14.585     6.50    67.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50770):   393.23  14.585     6.50    67.37
      + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50770):   393.23  14.585     6.50    67.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         92.38        0.0450
                   3.00         90.34        0.0450
                   6.00         89.94        0.0450
                   9.00         89.83        0.0450
                  12.00         89.80        0.0450
                  15.00         89.72        0.0450
                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15        0.0350      Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76        0.0450
                  30.00         89.78        0.0450
                  33.00         89.79        0.0450
                  36.00         89.80        0.0450
                  39.00         89.72        0.0450
                  42.00         90.35        0.0450
                  45.00         91.36        0.0450
                  48.00         92.10        0.0450
                  51.00         92.21        0.0450
                  54.00         92.34        0.0450
                  56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.15    89.29    .298E+02       0.0        0.31      13.27
        0.29    89.44    .119E+03       0.2        0.50       8.36
        0.44    89.58    .268E+03       0.7        0.65       6.38
        0.61    89.76    .588E+03       1.9        0.79       5.25
        0.78    89.93    .179E+04       5.1        0.71       5.86
        0.96    90.10    .329E+04      11.4        0.87       4.79
        1.13    90.27    .489E+04      20.2        1.03       4.03
        1.30    90.45    .656E+04      31.5        1.19       3.47
        1.47    90.62    .828E+04      45.0        1.35       3.06
        1.65    90.79    .100E+05      60.5        1.50       2.76
        1.82    90.97    .118E+05      77.9        1.64       2.53
        1.99    91.14    .136E+05      97.1        1.77       2.34
        2.17    91.31    .155E+05     118.1        1.90       2.18
        2.34    91.48    .173E+05     140.6        2.02       2.06
        2.51    91.66    .193E+05     164.7        2.13       1.95
        2.68    91.83    .212E+05     190.5        2.23       1.86
        2.86    92.00    .232E+05     218.0        2.33       1.78
        3.03    92.18    .253E+05     242.7        2.39       1.74
        3.20    92.35    .275E+05     262.6        2.37       1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  393.23    14.59     6.50  67.37      1.02       0.92
   OUTFLOW: ID= 1 ( 60770)  393.23    14.55     6.58  67.37      1.01       0.91


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       12.78        11.79
     Dep. Storage     (mm)=        2.00         8.70
     Average Slope     (%)=        1.50         1.50
     Length            (m)=      404.74        43.00
     Mannings n           =       0.015        0.330

     Max.Eff.Inten.(mm/hr)=      111.66        67.38
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=        5.46 (ii)   16.57 (ii)
     Unit Hyd. Tpeak (min)=        5.00        20.00
     Unit Hyd. peak  (cms)=        0.20         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.65         1.22          4.498 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=       82.74        40.87          61.80
     TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
     RUNOFF COEFFICIENT   =        0.98         0.48           0.73


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.6    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40780):    24.57    4.498     6.00    61.80
      + ID2= 2 ( 60770):   393.23   14.551     6.58    67.37
        ================================================
        ID = 3 ( 50780):   417.81   15.638     6.50    67.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        5.38         2.81
     Dep. Storage     (mm)=        2.00         5.74
     Average Slope     (%)=        1.20         1.20
     Length            (m)=      233.56        52.00
     Mannings n           =       0.015        0.270

     Max.Eff.Inten.(mm/hr)=      111.66        76.28
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=        4.20 (ii)   15.43 (ii)
     Unit Hyd. Tpeak (min)=        5.00        20.00
     Unit Hyd. peak  (cms)=        0.24         0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.57         0.34          1.809 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=       82.74        45.07          68.73
     TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
     RUNOFF COEFFICIENT   =        0.98         0.53           0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        4.66         0.49
     Dep. Storage     (mm)=        2.00         7.60
     Average Slope     (%)=        1.40         1.40
     Length            (m)=      185.29        48.00
     Mannings n           =       0.015        0.330

     Max.Eff.Inten.(mm/hr)=      111.66        70.42
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=        3.49 (ii)    7.53 (ii)
     Unit Hyd. Tpeak (min)=        5.00        10.00
     Unit Hyd. peak  (cms)=        0.26         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.43         0.08          1.504 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=       82.74        41.08          78.65
     TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
     RUNOFF COEFFICIENT   =        0.98         0.48           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40790):     8.18    1.809     6.00    68.73
      + ID2= 2 ( 40800):     5.15    1.504     6.00    78.65
        ================================================
        ID = 3 ( 50795):    13.33    3.313     6.00    72.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7780      0.6570
                          0.0040      0.0150   |    1.1550      0.7720
                          0.0090      0.0810   |    1.5780      0.8930
                          0.0120      0.1550   |    1.9240      0.9870
                          0.0140      0.2370   |    2.4190      1.1190
                          0.0160      0.3260   |    2.9510      1.2560
                          0.0620      0.3720   |    3.5980      1.3270
                          0.2560      0.4700   |    4.5570      1.3990
                          0.5310      0.5740   |    5.7230      1.4730

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332     3.313      6.00      72.56
   OUTFLOW: ID= 1 ( 70180)     13.332     0.588      6.50      72.49
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 17.75
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5936

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  --------------------------
  | Junction Command(70181) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        1.41         2.16
     Dep. Storage     (mm)=        1.00         1.50
     Average Slope     (%)=        1.00         2.00
     Length            (m)=      154.27        40.00
     Mannings n           =       0.013        0.250
```

```
      Max.Eff.Inten.(mm/hr)=     111.66        94.61
                   over (min)        5.00        15.00
      Storage Coeff.  (min)=       3.17 (ii)   10.39 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.27         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.38         0.39          0.737 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      83.74        55.63          65.38
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.99         0.66           0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40805):     3.57   0.737     6.00    65.38
      + ID2= 2 ( 70180):    13.33   0.588     6.50    72.49
        ================================================
        ID = 3 ( 50790):    16.90   1.042     6.00    70.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50790):    16.90   1.042     6.00    70.99
      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50790):    16.90   1.042     6.00    70.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50780):   417.81  15.638     6.50    67.04
      + ID2= 2 ( 50790):    16.90   1.042     6.00    70.99
        ================================================
        ID = 3 ( 50800):   434.71  16.401     6.50    67.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         88.54        0.0450
                   3.00         88.18        0.0450
                   6.00         87.54        0.0450
                   9.00         87.44        0.0450
                  12.00         87.13        0.0450
                  15.00         87.23        0.0450
                  18.00         87.18        0.0450
                  21.00         86.49    0.0450 /0.0350  Main Channel
                  24.00         85.82        0.0350      Main Channel
                  27.00         86.44    0.0350 /0.0450  Main Channel
                  30.00         87.18        0.0450
                  33.00         87.16        0.0450
                  36.00         87.25        0.0450
                  39.00         87.46        0.0450
                  42.00         87.70        0.0450
                  45.00         87.80        0.0450
                  48.00         88.00        0.0450
                  49.00         88.12        0.0450
                  50.00         88.23        0.0450
                  52.00         88.59        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   85.95    .779E+02       0.0         0.37       48.75
        0.25   86.07    .312E+03       0.2         0.59       30.71
        0.37   86.19    .701E+03       0.5         0.77       23.44
        0.49   86.32    .125E+04       1.1         0.94       19.35
        0.62   86.44    .195E+04       1.9         1.09       16.67
        0.77   86.59    .299E+04       3.8         1.36       13.29
        0.92   86.74    .424E+04       6.2         1.59       11.42
        1.07   86.89    .570E+04       9.3         1.77       10.25
        1.22   87.04    .736E+04      13.0         1.92        9.44
        1.37   87.19    .938E+04      16.8         1.94        9.33
        1.52   87.34    .134E+05      22.9         1.86        9.74
        1.66   87.49    .182E+05      31.1         1.86        9.72
        1.81   87.64    .237E+05      41.6         1.91        9.51
        1.96   87.79    .298E+05      53.9         1.96        9.22
        2.11   87.94    .365E+05      68.9         2.05        8.84
        2.26   88.09    .437E+05      86.5         2.15        8.43
        2.41   88.24    .513E+05     106.2         2.25        8.04
        2.56   88.39    .592E+05     128.2         2.36        7.69
        2.71   88.54    .674E+05     152.5         2.46        7.36

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  434.71    16.40     6.50  67.20      1.35      1.94
   OUTFLOW: ID= 1 ( 60800)  434.71    15.86     6.67  67.20      1.32      1.94



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--------------------
| CALIB            |
| STANDHYD ( 40820)|   Area    (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         11.23
     Dep. Storage     (mm)=       2.00          9.57
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     307.74         44.00
     Mannings n           =      0.015         0.390

     Max.Eff.Inten.(mm/hr)=     111.66         63.46
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       4.07 (ii)    15.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.24          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.56          1.13          1.339 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      82.74         36.66          42.64
     TOTAL RAINFALL   (mm)=      84.74         84.74          84.74
     RUNOFF COEFFICIENT   =       0.98          0.43           0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  73.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40820):    14.21   1.339     6.00    42.64
      + ID2= 2 ( 60800):   434.71  15.864     6.67    67.20
        ================================================
        ID = 3 ( 50820):   448.91  16.357     6.67    66.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50500):  1213.24  57.876     6.92    61.10
      + ID2= 2 ( 50820):   448.91  16.357     6.67    66.42
        ================================================
        ID = 3 ( 50830):  1662.16  73.900     6.83    62.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         82.12        0.0450
                  20.00         81.53        0.0450
                  24.00         81.26        0.0450
                  28.00         81.27        0.0450
                  32.00         80.34    0.0450 /0.0350  Main Channel
                  36.00         79.95        0.0350      Main Channel
                  40.00         80.78        0.0450
                  44.00         81.45        0.0450
                  48.00         81.53        0.0450
                  52.00         81.49        0.0450
                  56.00         81.51        0.0450
                  60.00         81.58        0.0450
                  64.00         81.58        0.0450
                  68.00         81.61        0.0450
                  72.00         81.75        0.0450
                  80.00         82.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   80.05    .555E+01       0.0         0.24       5.45
        0.19   80.14    .222E+02       0.1         0.38       3.43
        0.29   80.24    .499E+02       0.3         0.50       2.62
        0.39   80.34    .888E+02       0.7         0.60       2.16
        0.50   80.45    .146E+03       1.4         0.77       1.68
        0.62   80.57    .213E+03       2.5         0.91       1.43
        0.73   80.68    .290E+03       3.8         1.02       1.27
        0.85   80.80    .375E+03       5.4         1.13       1.15
        0.96   80.91    .471E+03       7.6         1.26       1.03
        1.08   81.03    .578E+03      10.1         1.37       0.95
        1.19   81.14    .695E+03      13.0         1.46       0.89
        1.31   81.26    .823E+03      16.2         1.53       0.85
        1.43   81.37    .100E+04      19.7         1.53       0.85
        1.54   81.49    .121E+04      24.1         1.56       0.84
        1.66   81.60    .155E+04      29.0         1.46       0.89
        1.77   81.72    .204E+04      36.4         1.39       0.93
        1.89   81.84    .259E+04      45.6         1.38       0.95
        2.00   81.95    .320E+04      56.7         1.38       0.94
        2.12   82.07    .387E+04      69.6         1.40       0.93

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1662.16    73.90     6.83  62.53      2.11      1.40
   OUTFLOW: ID= 1 ( 60830) 1662.16    73.86     6.83  62.53      2.12      1.40



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| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36         15.15
     Dep. Storage     (mm)=       2.00          5.54
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     550.83         40.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     111.66        113.54
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       6.85 (ii)    14.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.18          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       6.98          2.82          9.444 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      82.74         49.99          67.49
     TOTAL RAINFALL   (mm)=      84.74         84.74          84.74
     RUNOFF COEFFICIENT   =       0.98          0.59           0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45          1.59
     Dep. Storage     (mm)=       2.00          9.61
     Average Slope     (%)=       3.20          3.20
     Length            (m)=     116.69         69.00
     Mannings n           =      0.015         0.370

     Max.Eff.Inten.(mm/hr)=     111.66         65.80
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.06 (ii)    14.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.18          0.241 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      82.74         37.93          44.40
     TOTAL RAINFALL   (mm)=      84.74         84.74          84.74
     RUNOFF COEFFICIENT   =       0.98          0.45           0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  75.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51   9.444     6.00    67.49
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```
       + ID2= 2 ( 40840):     2.04   0.241     6.00    44.40
         ==================================================
         ID = 3 ( 50840):    47.56   9.685     6.00    66.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 ( 50840):    47.56   9.685     6.00    66.50
       + ID2= 2 ( 60830):  1662.16  73.855     6.83    62.53
         ==================================================
         ID = 1 ( 50840):  1709.71  75.006     6.83    62.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         82.18        0.0450
                   32.00         79.04        0.0450
                   40.00         78.76        0.0450
                   48.00         78.58        0.0450
                   56.00         78.21        0.0450
                   64.00         76.89        0.0350      Main Channel
                   72.00         78.08        0.0450
                   80.00         79.44        0.0450
                   88.00         80.28        0.0450
                   96.00         80.92        0.0450
                  104.00         81.29        0.0450
                  112.00         81.62        0.0450
                  120.00         81.76        0.0450
                  128.00         81.81        0.0450
                  140.00         82.02        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.27    77.16    .320E+03       0.2          0.48      24.00
        0.54    77.43    .128E+04       1.4          0.75      15.12
        0.81    77.70    .288E+04       4.2          0.99      11.54
        1.08    77.97    .512E+04       9.0          1.20       9.53
        1.35    78.24    .799E+04      16.6          1.42       8.02
        1.62    78.51    .119E+05      26.9          1.54       7.40
        1.89    78.78    .176E+05      41.0          1.59       7.15
        2.16    79.05    .252E+05      62.9          1.71       6.68
        2.43    79.32    .341E+05      93.9          1.89       6.05
        2.70    79.59    .438E+05     131.1          2.05       5.56
        2.97    79.86    .544E+05     175.1          2.20       5.18
        3.24    80.13    .660E+05     226.4          2.35       4.86
        3.51    80.40    .787E+05     284.9          2.48       4.60
        3.77    80.67    .924E+05     351.1          2.60       4.39
        4.04    80.94    .107E+06     425.7          2.72       4.20
        4.31    81.21    .124E+06     507.1          2.81       4.06
        4.58    81.48    .141E+06     598.4          2.90       3.94
        4.85    81.75    .161E+06     695.9          2.96       3.86
        5.12    82.02    .185E+06     800.9          2.97       3.85

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 1709.71    75.01    6.83  62.64      2.26      1.77
   OUTFLOW: ID= 1 ( 60840) 1709.71    74.70    6.92  62.64      2.26      1.77


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| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14         18.19
     Dep. Storage     (mm)=       2.00          7.29
     Average Slope     (%)=       2.00          2.00
     Length            (m)=     418.93        142.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     111.66         50.47
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       5.11 (ii)    27.69 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.21          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.94          1.47          2.677 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33          6.00
     RUNOFF VOLUME    (mm)=      82.74         41.88         51.94
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.49          0.61

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40850):    26.33   2.677     6.00    51.94
       + ID2= 2 ( 60840):  1709.71  74.700     6.92    62.64
         ==================================================
         ID = 3 ( 50850):  1736.04  75.610     6.92    62.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77         35.37
     Dep. Storage     (mm)=       2.00          8.79
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     611.77        120.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     111.66         49.58
                   over (min)       5.00         35.00
     Storage Coeff.  (min)=       7.30 (ii)    31.58 (ii)
     Unit Hyd. Tpeak (min)=       5.00         35.00
     Unit Hyd. peak  (cms)=       0.17          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.41          2.55          6.493 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.42          6.00
     RUNOFF VOLUME    (mm)=      82.74         42.43         56.13
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.50          0.66

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         85.55        0.0450
                   24.00         85.23        0.0450
                   28.00         85.17        0.0450
                   32.00         85.07        0.0450
                   36.00         84.96        0.0350      Main Channel
                   40.00         84.96        0.0350      Main Channel
                   44.00         85.00    0.0350 /0.0450  Main Channel
                   48.00         85.03        0.0450
                   52.00         85.18        0.0450
                   56.00         85.22        0.0450
                   60.00         85.31        0.0450
                   64.00         85.33        0.0450
                   68.00         85.38        0.0450
                   80.00         85.59        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.01    84.96    .992E+01       0.0          0.05      238.32
        0.04    84.99    .159E+03       0.0          0.21       57.53
        0.07    85.03    .408E+03       0.2          0.32       38.32
        0.10    85.06    .751E+03       0.4          0.40       30.54
        0.13    85.09    .114E+04       0.7          0.47       25.77
        0.16    85.12    .158E+04       1.2          0.53       22.66
        0.19    85.15    .206E+04       1.7          0.59       20.45
        0.22    85.18    .259E+04       2.3          0.64       18.91
        0.25    85.21    .321E+04       3.0          0.67       18.12
        0.29    85.24    .393E+04       3.8          0.70       17.32
        0.32    85.27    .473E+04       4.8          0.73       16.56
        0.35    85.30    .562E+04       5.9          0.76       15.89
        0.38    85.34    .663E+04       7.0          0.77       15.69
        0.41    85.37    .777E+04       8.5          0.80       15.20
        0.44    85.40    .902E+04      10.2          0.82       14.69
        0.47    85.43    .104E+05      12.2          0.85       14.19
        0.50    85.46    .118E+05      14.3          0.88       13.73
        0.53    85.49    .133E+05      16.7          0.91       13.31
        0.56    85.52    .150E+05      19.3          0.94       12.91

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40880)   56.14     6.49    6.00  56.13      0.36      0.77
   OUTFLOW: ID= 1 ( 60880)   56.14     4.26    6.08  56.11      0.30      0.71


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| ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)=1900.00
| DT=  5.0 min     |     Length        (m)= 888.03
--------------------     Slope       (m/m)=  0.004
                         Manning n        =  0.013

       <---------------- TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE     VELOCITY    TRAV.TIME
         (m)      (cu.m.)      (cms)        (m/s)        min
        0.10    .213E+03       0.2          0.93        15.91
        0.20    .426E+03       0.7          1.41        10.53
        0.30    .639E+03       1.3          1.76         8.42
        0.40    .853E+03       2.0          2.04         7.25
        0.50    .107E+04       2.7          2.27         6.51
        0.60    .128E+04       3.6          2.47         5.99
        0.70    .149E+04       4.4          2.64         5.60
        0.80    .171E+04       5.4          2.79         5.30
        0.90    .192E+04       6.3          2.92         5.06
        1.00    .213E+04       7.3          3.04         4.87
        1.10    .234E+04       8.3          3.15         4.71
        1.20    .256E+04       9.3          3.24         4.57
        1.30    .277E+04      10.4          3.33         4.45
        1.40    .298E+04      11.4          3.40         4.35
        1.50    .320E+04      12.5          3.48         4.26
        1.60    .341E+04      13.6          3.54         4.18
        1.70    .362E+04      14.7          3.60         4.11
        1.80    .384E+04      15.8          3.66         4.05
        1.90    .405E+04      16.9          3.71         3.99

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60880)   56.14     4.26    6.08  56.11      0.68      2.61
   OUTFLOW: ID= 1 ( 80880)   56.14     4.09    6.17  56.11      0.66      2.57


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--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      18.24         23.47
     Dep. Storage     (mm)=       2.00          8.20
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     527.32         85.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     111.66         63.36
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       7.02 (ii)    26.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.17          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.91          2.09          4.961 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33          6.00
     RUNOFF VOLUME    (mm)=      82.74         41.36         54.95
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.49          0.65

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  75.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40900)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.41          5.15
     Dep. Storage     (mm)=       1.00          7.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     300.67         43.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     111.66        108.42
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       5.16 (ii)    13.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.95          0.95          2.783 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      83.74         48.23         65.27
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.99          0.57          0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
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```
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------      (ha)      (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):  13.56      2.78      6.00   65.27
     ======================================================
     MAJOR SYS.(ID= 2):   2.58      1.82      6.00   65.27
     MINOR SYS.(ID= 3):  10.98      0.96      5.83   65.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40890):    41.71   4.961     6.00    54.95
      + ID2= 2 ( 50850):  1736.04  75.610     6.92    62.48
        ====================================================
        ID = 3 ( 50890):  1777.75  76.966     6.92    62.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50890):  1777.75  76.966     6.92    62.30
      + ID2= 2 ( 80880):    56.14   4.094     6.17    56.11
        ====================================================
        ID = 1 ( 50890):  1833.89  79.914     6.83    62.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50890):  1833.89  79.914     6.83    62.11
      + ID2= 2 ( 90020):    10.98   0.960     5.83    65.27
        ====================================================
        ID = 3 ( 50890):  1844.86  80.224     6.83    62.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         79.05        0.0450
                   2.00         78.40        0.0450
                   4.00         77.75        0.0450
                   6.00         77.16        0.0450
                   8.00         76.78        0.0450
                  10.00         76.65        0.0450
                  12.00         76.60        0.0450
                  14.00         76.58        0.0450
                  16.00         76.08        0.0450
                  18.00         75.49    0.0450 /0.0350  Main Channel
                  20.00         75.46        0.0350      Main Channel
                  22.00         75.52    0.0350 /0.0450  Main Channel
                  24.00         76.15        0.0450
                  26.00         76.44        0.0450
                  28.00         76.56        0.0450
                  30.00         76.68        0.0450
                  32.00         76.86        0.0450
                  34.00         77.01        0.0450
                  36.00         77.10        0.0450
                  40.00         79.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.03    75.49    .127E+02       0.0         0.14      32.03
        0.22    75.68    .231E+03       0.6         0.69       6.29
        0.40    75.87    .510E+03       2.0         1.01       4.28
        0.59    76.05    .849E+03       4.1         1.25       3.45
        0.78    76.24    .125E+04       6.9         1.43       3.02
        0.97    76.43    .175E+04      10.6         1.57       2.75
        1.15    76.62    .240E+04      14.6         1.57       2.75
        1.34    76.80    .343E+04      21.1         1.60       2.71
        1.53    76.99    .465E+04      30.1         1.68       2.58
        1.71    77.18    .605E+04      41.3         1.77       2.44
        1.90    77.36    .754E+04      55.7         1.92       2.26
        2.09    77.55    .908E+04      72.1         2.06       2.10
        2.27    77.74    .107E+05      90.6         2.20       1.96
        2.46    77.92    .123E+05     111.1         2.34       1.84
        2.65    78.11    .140E+05     133.5         2.48       1.74
        2.84    78.30    .157E+05     157.9         2.61       1.66
        3.02    78.49    .175E+05     184.1         2.73       1.58
        3.21    78.67    .193E+05     212.1         2.85       1.52
        3.40    78.86    .211E+05     242.1         2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1844.86    80.22    6.83  62.13      2.17      2.12
   OUTFLOW: ID= 1 ( 60900) 1844.86    80.16    6.83  62.13      2.17      2.12


--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77         2.15
     Dep. Storage     (mm)=       2.00         7.07
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     214.73        44.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     111.66       127.21
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.59 (ii)   11.22 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.12         0.50          1.572 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      82.74        51.40          67.98
     TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
     RUNOFF COEFFICIENT   =       0.98         0.61           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40910):     6.92   1.572     6.00    67.98
      + ID2= 2 ( 60900):  1844.86  80.159     6.83    62.13
        ====================================================
        ID = 3 ( 50910):  1851.78  80.307     6.83    62.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.034 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.197
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.604

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.36

     Unit Hyd Qpeak  (cms)=   1.897

     PEAK FLOW       (cms)=   1.865 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  51.487
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.069 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.376
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    17.88   1.865     6.25    51.49
      + ID2= 2 (******):     0.44   0.069     6.08    51.38
        ====================================================
        ID = 3 (******):    18.32   1.914     6.17    51.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.070

     PEAK FLOW       (cms)=   0.053 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.347
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   1.207

     PEAK FLOW       (cms)=   1.061 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.455
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.33   0.053     6.00    51.35
      + ID2= 2 (******):     7.90   1.061     6.08    51.46
        ====================================================
        ID = 3 (******):     8.23   1.113     6.08    51.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.19   0.034     6.00    51.20
      + ID2= 2 (******):    18.32   1.914     6.17    51.48
        ====================================================
        ID = 3 (******):    18.51   1.936     6.17    51.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    18.51   1.936     6.17    51.48
      + ID2= 2 (******):     8.23   1.113     6.08    51.45
        ====================================================
        ID = 1 (******):    26.74   3.000     6.17    51.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       1.70         1.00
     Length            (m)=      78.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     111.66        83.83
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.80 (ii)    1.80 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.32
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.80         0.01          1.810 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      82.74        51.50          82.42
     TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
```

```
      RUNOFF COEFFICIENT   =       0.98         0.61          0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     5.85   1.810     6.00    82.42
      + ID2= 2 (******):     0.27   0.110     6.50    60.44
        ================================================
        ID = 3 (******):     6.12   1.810     6.00    81.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.27   0.324     6.00    76.40
      + ID2= 2 (******):     4.42   0.959     6.50    60.44
        ================================================
        ID = 3 (******):     4.70   0.959     6.50    61.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.70   0.959     6.50    61.37
      + ID2= 2 (******):     6.12   1.810     6.00    81.45
        ================================================
        ID = 1 (******):    10.82   2.135     6.00    72.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        426.51        0.0450
                   0.98        426.14        0.0350      Main Channel
                   2.04        426.14        0.0350      Main Channel
                  20.51        426.51        0.0350      Main Channel

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   426.14    .579E+00       0.0          0.03     191.52
        0.02   426.16    .114E+02       0.0          0.14      39.52
        0.04   426.18    .285E+02       0.0          0.19      27.56
        0.06   426.20    .520E+02       0.0          0.24      22.17
        0.08   426.22    .818E+02       0.1          0.28      18.92
        0.10   426.24    .118E+03       0.1          0.32      16.68
        0.12   426.26    .161E+03       0.2          0.36      15.02
        0.14   426.27    .210E+03       0.3          0.39      13.73
        0.16   426.29    .265E+03       0.3          0.42      12.69
        0.18   426.31    .326E+03       0.5          0.45      11.82
        0.20   426.33    .394E+03       0.6          0.48      11.10
        0.22   426.35    .469E+03       0.7          0.51      10.47
        0.24   426.37    .549E+03       0.9          0.54       9.93
        0.26   426.39    .637E+03       1.1          0.56       9.46
        0.28   426.41    .730E+03       1.3          0.59       9.03
        0.30   426.43    .830E+03       1.6          0.62       8.65
        0.32   426.45    .936E+03       1.9          0.64       8.31
        0.34   426.47    .105E+04       2.2          0.67       8.01
        0.35   426.49    .117E+04       2.5          0.69       7.72

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    10.82     2.13     6.00   72.73      0.33      0.66
   OUTFLOW: ID= 1 (******)    10.82     1.81     6.00   72.73      0.31      0.63


--------------------
| ROUTEPIPE(******)|     PIPE Number      =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)= 900.00
| DT=  5.0 min     |     Length       (m)= 372.00
--------------------     Slope      (m/m)=  0.004
                         Manning n        =  0.013

      <----------------- TRAVEL TIME TABLE ------------------->
       DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
         (m)     (cu.m.)      (cms)        (m/s)        min
        0.05    .423E+02       0.1          0.58        10.67
        0.09    .846E+02       0.2          0.90         6.89
        0.14    .127E+03       0.4          1.15         5.39
        0.19    .169E+03       0.6          1.36         4.55
        0.24    .211E+03       0.9          1.55         4.01
        0.28    .254E+03       1.2          1.71         3.63
        0.33    .296E+03       1.5          1.85         3.34
        0.38    .338E+03       1.8          1.99         3.12
        0.43    .381E+03       2.2          2.11         2.94
        0.47    .423E+03       2.5          2.22         2.80
        0.52    .465E+03       2.9          2.32         2.67
        0.57    .507E+03       3.3          2.41         2.57
        0.62    .550E+03       3.7          2.50         2.48
        0.66    .592E+03       4.1          2.58         2.40
        0.71    .634E+03       4.5          2.66         2.33
        0.76    .677E+03       5.0          2.73         2.27
        0.81    .719E+03       5.4          2.80         2.21
        0.85    .761E+03       5.9          2.86         2.17
        0.90    .804E+03       6.3          2.92         2.12

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     3.84     0.85     6.00   76.39      0.23      1.52
   OUTFLOW: ID= 1 (******)     3.84     0.86     6.00   76.40      0.23      1.53


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     3.84   0.859     6.00    76.40
      + ID2= 2 (******):    26.74   3.000     6.17    51.47
        ================================================
        ID = 3 (******):    30.58   3.565     6.08    54.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    30.58   3.565     6.08    54.60
      + ID2= 2 (******):    10.82   1.812     6.00    72.73
        ================================================
        ID = 1 (******):    41.39   5.080     6.00    59.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        418.26        0.0450
                  40.58        417.27        0.0450
                  68.64        416.80        0.0450
                 140.74        415.56        0.0450
                 163.74        415.03    0.0450 /0.0350  Main Channel
                 211.93        413.30        0.0350      Main Channel
                 250.43        411.92        0.0350      Main Channel
                 258.86        411.77        0.0350      Main Channel
                 276.07        411.80        0.0350      Main Channel
                 290.03        411.70        0.0350      Main Channel
                 294.99        411.74        0.0350      Main Channel
                 298.74        411.97        0.0350      Main Channel
                 309.80        412.64        0.0350      Main Channel
                 321.40        413.39        0.0350      Main Channel
                 332.67        415.03    0.0350 /0.0450  Main Channel
                 344.47        416.63        0.0450
                 360.44        418.31        0.0450
                 381.73        419.43        0.0450
                 385.80        419.95        0.0450
                 389.30        420.75        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.33   412.03    .115E+05       14.5          1.18      13.21
        0.67   412.36    .302E+05       61.5          1.91       8.18
        1.00   412.70    .535E+05      139.9          2.46       6.38
        1.33   413.03    .814E+05      252.5          2.91       5.37
        1.66   413.36    .114E+06      402.0          3.32       4.72
        2.00   413.70    .150E+06      597.3          3.74       4.19
        2.33   414.03    .190E+06      834.3          4.12       3.80
        2.66   414.36    .234E+06     1114.3          4.47       3.50
        2.99   414.69    .281E+06     1439.4          4.80       3.26
        3.33   415.03    .332E+06     1811.8          5.12       3.06
        3.69   415.39    .393E+06     2361.5          5.65       2.77
        4.05   415.75    .459E+06     2978.2          6.10       2.57
        4.41   416.10    .533E+06     3668.2          6.46       2.42
        4.76   416.46    .615E+06     4437.5          6.78       2.31
        5.12   416.82    .705E+06     5290.7          7.05       2.22
        5.48   417.18    .804E+06     6232.2          7.29       2.15
        5.84   417.54    .910E+06     7276.0          7.51       2.08
        6.20   417.90    .102E+07     8417.1          7.74       2.02
        6.56   418.26    .114E+07     9654.5          7.95       1.97

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    41.39     5.08     6.00   59.34      0.12      1.18
   OUTFLOW: ID= 1 (******)    41.39     3.91     6.25   59.34      0.09      1.18


--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   2.406 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  51.495
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    31.02   2.406     6.42    51.49
      + ID2= 2 (******):    41.39   3.914     6.25    59.34
        ================================================
        ID = 3 (******):    72.41   6.245     6.33    55.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
================================================================================

        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
        V    V   I    SS     U   U   A A   L
         V  V    I     SS    U   U  AAAAA  L
         V  V    I      SS   U   U  A   A  L
          VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
  Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9

DATE: 02/19/2026                          TIME: 02:35:36

USER:


COMMENTS: _____________________________________________________

--------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : 25mmWQ-4hr Chicago (Burlingto **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\DPham\AppD
|                  |              ata\Local\Temp\
|                  |              257afcce-e1cf-4cdb-b646-cb15a9fd682a\fb38eae9
| Ptotal= 22.90 mm |    Comments: Fourteen Mile Creek at Oakville Rain Gau
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.00    2.60 |  2.00    0.60 |  3.00    0.00
                0.50   41.60 |  1.50    0.00 |  2.50    1.00 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.47

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

```
                0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   3.502

     PEAK FLOW       (cms)=   0.288 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   2.625
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.115

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   4.557

     PEAK FLOW       (cms)=   0.374 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   2.631
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.115

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50010)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40010):    43.09   0.288     1.42     2.62
     + ID2= 2 ( 40030):    54.88   0.374     1.33     2.63
       ================================================
       ID = 3 ( 50010):    97.97   0.660     1.42     2.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60010)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         160.98        0.0450
                   10.00         160.83        0.0450
                   20.00         160.72        0.0450
                   30.00         160.67        0.0450
                   40.00         160.61        0.0450
                   50.00         160.60        0.0450
                   60.00         160.55        0.0450
                   70.00         160.65        0.0450
                   80.00         159.78        0.0450
                   90.00         157.33    0.0450 /0.0350  Main Channel
                  100.00         157.18        0.0350      Main Channel
                  110.00         158.55        0.0450
                  120.00         160.34        0.0450
                  130.00         160.29        0.0450
                  140.00         160.30        0.0450
                  150.00         160.38        0.0450
                  160.00         160.53        0.0450
                  170.00         160.58        0.0450
                  180.00         160.51        0.0450
                  190.00         160.53        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   157.33    .123E+04       0.4         0.43      57.39
        0.32   157.50    .422E+04       2.5         0.88      27.82
        0.49   157.67    .768E+04       6.3         1.20      20.47
        0.66   157.83    .116E+05      11.5         1.45      16.89
        0.83   158.00    .160E+05      18.2         1.67      14.70
        0.99   158.17    .209E+05      26.5         1.86      13.18
        1.16   158.34    .263E+05      36.3         2.03      12.06
        1.33   158.51    .321E+05      47.9         2.19      11.18
        1.50   158.68    .384E+05      62.7         2.40      10.21
        1.67   158.84    .451E+05      79.9         2.60       9.41
        1.84   159.01    .522E+05      99.0         2.79       8.79
        2.00   159.18    .597E+05     120.2         2.96       8.28
        2.17   159.35    .676E+05     143.3         3.11       7.86
        2.34   159.52    .759E+05     168.5         3.26       7.51
        2.51   159.69    .846E+05     195.8         3.40       7.20
        2.68   159.86    .938E+05     224.4         3.52       6.97
        2.85   160.02    .104E+06     254.6         3.61       6.78
        3.02   160.19    .114E+06     287.5         3.70       6.62
        3.18   160.36    .127E+06     315.8         3.64       6.72

                                   <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50010)    97.97     0.66     1.42    2.63      0.17      0.46
   OUTFLOW: ID= 1 ( 60010)    97.97     0.33     1.92    2.62      0.14      0.43

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40020)|   Area     (ha)=  51.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       33.87         17.45
     Dep. Storage     (mm)=        2.00          6.20
     Average Slope     (%)=        1.30          1.30
     Length            (m)=      584.91         50.00
     Mannings n           =       0.015         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        11.96
                   over (min)       10.00        35.00
     Storage Coeff.  (min)=       10.55 (ii)   34.01 (ii)
     Unit Hyd. Tpeak (min)=       10.00        35.00
     Unit Hyd. peak  (cms)=        0.11         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=        2.97         0.26          3.056 (iii)
     TIME TO PEAK    (hrs)=        1.00         1.42           1.00
     RUNOFF VOLUME    (mm)=       20.90         4.77          13.80
     TOTAL RAINFALL   (mm)=       22.90        22.90          22.90
     RUNOFF COEFFICIENT   =        0.91         0.21           0.60

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50020)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40020):    51.32   3.056     1.00    13.80
     + ID2= 2 ( 60010):    97.97   0.330     1.92     2.62
       ================================================
       ID = 3 ( 50020):   149.29   3.077     1.00     6.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         153.66        0.0450
                    1.00         153.24        0.0450
                    2.00         152.95        0.0450
                    3.00         152.70        0.0450
                    4.00         152.40        0.0450
                    5.00         152.09        0.0450
                    6.00         151.83        0.0450
                    7.00         151.60        0.0450
                    8.00         151.49    0.0450 /0.0350  Main Channel
                    9.00         151.42        0.0350      Main Channel
                   10.00         151.38        0.0350      Main Channel
                   11.00         151.40        0.0350      Main Channel
                   12.00         151.38        0.0350      Main Channel
                   13.00         151.38        0.0350      Main Channel
                   14.00         151.38        0.0350      Main Channel
                   15.00         151.50    0.0350 /0.0450  Main Channel
                   16.00         151.56        0.0450
                   17.00         151.60        0.0450
                   25.00         153.59        0.0450
                   26.00         153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   151.49    .140E+03       0.2         0.36      10.54
        0.23   151.60    .355E+03       0.9         0.58       6.57
        0.34   151.72    .624E+03       2.0         0.74       5.11
        0.45   151.83    .916E+03       3.6         0.89       4.27
        0.57   151.94    .123E+04       5.5         1.02       3.73
        0.68   152.05    .157E+04       7.8         1.13       3.35
        0.79   152.17    .193E+04      10.5         1.24       3.06
        0.90   152.28    .231E+04      13.6         1.34       2.83
        1.02   152.39    .271E+04      17.1         1.43       2.65
        1.13   152.50    .314E+04      20.9         1.52       2.50
        1.24   152.62    .358E+04      25.2         1.60       2.37
        1.35   152.73    .405E+04      29.8         1.67       2.26
        1.47   152.84    .454E+04      34.9         1.75       2.17
        1.58   152.95    .505E+04      40.3         1.81       2.09
        1.69   153.07    .558E+04      46.2         1.88       2.01
        1.80   153.18    .614E+04      52.6         1.95       1.95
        1.92   153.29    .672E+04      59.4         2.01       1.88
        2.03   153.40    .731E+04      66.7         2.07       1.83
        2.14   153.52    .793E+04      74.5         2.14       1.77

                                   <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50020)   149.29     3.08     1.00    6.47      0.42      0.83
   OUTFLOW: ID= 1 ( 60020)   149.29     2.92     1.08    6.47      0.41      0.82

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--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area     (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       52.31         18.38
     Dep. Storage     (mm)=        2.00          6.00
     Average Slope     (%)=        1.20          1.20
     Length            (m)=      686.45         52.00
     Mannings n           =       0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        21.14
                   over (min)       10.00        35.00
     Storage Coeff.  (min)=       11.89 (ii)   31.08 (ii)
     Unit Hyd. Tpeak (min)=       10.00        35.00
     Unit Hyd. peak  (cms)=        0.10         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=        4.24         0.42          4.387 (iii)
     TIME TO PEAK    (hrs)=        1.00         1.42           1.00
     RUNOFF VOLUME    (mm)=       20.90         5.84          14.88
     TOTAL RAINFALL   (mm)=       22.90        22.90          22.90
     RUNOFF COEFFICIENT   =        0.91         0.25           0.65

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40040):    70.68   4.387     1.00    14.88
```

```
       + ID2= 2 ( 60020):   149.29   2.921     1.08     6.47
         ================================================
         ID = 3 ( 50220):   219.97   7.273     1.00     9.17

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.0560
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50220)    219.973     7.273      1.00       9.17
   OUTFLOW: ID= 1 ( 70010)    219.973     0.365      3.25       9.16
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.02
                  TIME SHIFT OF PEAK FLOW         (min)=135.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.6509
--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(70011) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   219.97   0.365     3.25     9.16
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 70012):   219.97   0.365     3.25     9.16

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         148.49        0.0450
                    3.00         148.12        0.0450
                    6.00         148.07        0.0450
                    9.00         147.63        0.0450
                   12.00         147.56        0.0450
                   15.00         147.55        0.0450
                   18.00         147.46        0.0450
                   21.00         147.41        0.0450
                   24.00         147.36        0.0450
                   27.00         147.38        0.0450
                   30.00         147.22        0.0450
                   33.00         147.00        0.0450
                   36.00         146.34        0.0450
                   39.00         145.57        0.0350      Main Channel
                   42.00         145.39        0.0350      Main Channel
                   45.00         145.66        0.0350      Main Channel
                   48.00         146.68        0.0450
                   51.00         147.50        0.0450
                   55.00         148.22        0.0450
                   60.00         148.42        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   145.48    .145E+03       0.0         0.25       83.65
        0.18   145.57    .581E+03       0.2         0.40       52.70
        0.35   145.74    .189E+04       1.1         0.73       29.09
        0.52   145.91    .348E+04       2.7         0.99       21.52
        0.68   146.07    .532E+04       5.0         1.19       17.84
        0.85   146.24    .740E+04       7.9         1.36       15.60
        1.02   146.41    .973E+04      11.5         1.51       14.07
        1.19   146.58    .123E+05      15.9         1.64       12.94
        1.35   146.74    .152E+05      21.2         1.78       11.93
        1.52   146.91    .183E+05      27.8         1.94       10.99
        1.69   147.08    .218E+05      35.0         2.05       10.39
        1.86   147.25    .259E+05      43.0         2.12       10.03
        2.02   147.41    .309E+05      50.6         2.09       10.18
        2.19   147.58    .383E+05      61.5         2.05       10.37
        2.36   147.75    .474E+05      77.1         2.07       10.25
        2.52   147.91    .571E+05      95.6         2.14        9.95
        2.69   148.08    .672E+05     116.0         2.20        9.65
        2.86   148.25    .783E+05     138.1         2.25        9.45
        3.03   148.42    .904E+05     163.4         2.31        9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 70012)  219.97     0.37     3.25    9.16      0.21       0.44
   OUTFLOW: ID= 1 ( 60040)  219.97     0.35     4.17    9.16      0.21       0.44


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--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area     (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       32.94         19.34
     Dep. Storage     (mm)=        2.00          6.30
     Average Slope     (%)=        3.30          3.30
     Length            (m)=      590.36         68.00
     Mannings n           =       0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         18.07
                   over (min)       10.00         30.00
     Storage Coeff.  (min)=       8.02 (ii)    25.36 (ii)
     Unit Hyd. Tpeak (min)=      10.00         30.00
     Unit Hyd. peak  (cms)=       0.13          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.80          0.44          2.983 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.33          1.00
     RUNOFF VOLUME    (mm)=      20.90          5.53         13.06
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.24          0.57

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40050):    52.28   2.983     1.00    13.06
      + ID2= 2 ( 60040):   219.97   0.351     4.17     9.16
        ================================================
        ID = 3 ( 50040):   272.25   2.990     1.00     9.91

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         146.35        0.0450
                   16.00         145.17        0.0450
                   18.00         144.62        0.0450
                   20.00         143.50        0.0450
                   26.00         141.63        0.0350      Main Channel
                   30.00         142.17        0.0350      Main Channel
                   34.00         144.28        0.0450
                   38.00         145.27        0.0450
                   50.00         146.42        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25   141.88    .129E+03       0.2         0.54       12.17
        0.50   142.13    .516E+03       1.1         0.86        7.67
        0.74   142.38    .111E+04       3.4         1.21        5.42
        0.99   142.63    .184E+04       7.0         1.50        4.37
        1.24   142.87    .269E+04      11.9         1.75        3.76
        1.49   143.12    .366E+04      18.2         1.96        3.36
        1.74   143.37    .476E+04      25.9         2.15        3.06
        1.98   143.62    .597E+04      35.3         2.33        2.82
        2.23   143.87    .729E+04      46.5         2.52        2.61
        2.48   144.11    .869E+04      59.3         2.69        2.44
        2.73   144.36    .102E+05      74.3         2.88        2.28
        2.97   144.61    .118E+05      92.4         3.09        2.13
        3.22   144.86    .136E+05     111.6         3.24        2.03
        3.47   145.11    .156E+05     133.1         3.37        1.95
        3.72   145.35    .178E+05     152.6         3.38        1.94
        3.97   145.60    .206E+05     175.6         3.37        1.95
        4.21   145.85    .239E+05     204.3         3.37        1.95
        4.46   146.10    .279E+05     238.6         3.38        1.95
        4.71   146.35    .324E+05     279.0         3.40        1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60040)  272.25     2.99     1.00    9.91      0.70       1.12
   OUTFLOW: ID= 1 ( 60050)  272.25     2.80     1.08    9.91      0.68       1.09


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--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         142.52        0.0450
                    2.00         142.41        0.0450
                    4.00         142.26        0.0450
                    6.00         142.08        0.0450
                    8.00         141.85        0.0450
                   10.00         141.61        0.0450
                   12.00         141.38        0.0450
                   14.00         141.11        0.0450
                   16.00         140.93        0.0450
                   18.00         140.83        0.0450
                   20.00         140.73        0.0350      Main Channel
                   22.00         140.55        0.0350      Main Channel
                   24.00         140.49        0.0350      Main Channel
                   26.00         140.65        0.0350      Main Channel
                   28.00         141.04        0.0450
                   30.00         141.72        0.0450
                   32.00         142.19        0.0450
                   40.00         142.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   140.57    .466E+02       0.0         0.23       24.59
        0.15   140.65    .155E+03       0.2         0.38       14.98
        0.23   140.73    .305E+03       0.5         0.51       11.12
        0.34   140.84    .598E+03       1.2         0.68        8.29
        0.45   140.95    .995E+03       2.3         0.80        7.09
        0.56   141.06    .147E+04       3.9         0.91        6.22
        0.68   141.17    .201E+04       6.1         1.04        5.45
        0.79   141.28    .259E+04       8.8         1.16        4.89
        0.90   141.39    .321E+04      12.0         1.27        4.47
        1.01   141.50    .389E+04      15.6         1.36        4.16
        1.12   141.61    .461E+04      19.7         1.45        3.90
        1.23   141.72    .537E+04      24.3         1.54        3.69
        1.34   141.84    .619E+04      29.4         1.61        3.52
        1.45   141.95    .707E+04      35.0         1.68        3.37
        1.56   142.06    .799E+04      41.1         1.75        3.24
        1.67   142.17    .898E+04      47.8         1.81        3.13
        1.79   142.28    .101E+05      54.6         1.85        3.07
        1.90   142.39    .113E+05      62.1         1.87        3.03
        2.01   142.50    .127E+05      70.3         1.88        3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  272.25     2.80     1.08    9.91      0.49       0.83
   OUTFLOW: ID= 1 ( 60060)  272.25     2.54     1.08    9.91      0.47       0.81


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--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area     (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.94          1.90
     Dep. Storage     (mm)=        2.00          7.70
     Average Slope     (%)=        2.60          2.60
     Length            (m)=      137.56         98.00
     Mannings n           =       0.015         0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

```
                0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         5.32
                over (min)        5.00        50.00
     Storage Coeff.  (min)=       3.59 (ii)   45.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00        50.00
     Unit Hyd. peak  (cms)=       0.26         0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.02          0.089 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.67           1.00
     RUNOFF VOLUME    (mm)=      20.90         4.06           8.48
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.18           0.37

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40060):     2.84   0.089     1.00     8.48
      + ID2= 2 ( 60060):   272.25   2.537     1.08     9.91
        ================================================
        ID = 3 ( 50070):   275.09   2.567     1.08     9.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       26.30         13.55
     Dep. Storage     (mm)=        2.00          5.60
     Average Slope     (%)=        1.40          1.40
     Length            (m)=      515.42         72.00
     Mannings n           =       0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        12.65
                over (min)       10.00        40.00
     Storage Coeff.  (min)=       9.56 (ii)   36.32 (ii)
     Unit Hyd. Tpeak (min)=      10.00        40.00
     Unit Hyd. peak  (cms)=       0.11         0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.28         0.23          2.345 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.50           1.00
     RUNOFF VOLUME    (mm)=      20.90         5.60          13.86
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.24           0.61

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40080):    39.85   2.345     1.00    13.86
      + ID2= 2 ( 50070):   275.09   2.567     1.08     9.89
        ================================================
        ID = 3 ( 50080):   314.94   4.635     1.08    10.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         141.24        0.0450
                 40.00         140.58        0.0450
                 50.00         140.57        0.0450
                 60.00         140.36        0.0450
                 70.00         140.19        0.0450
                 80.00         140.15        0.0450
                 90.00         139.70        0.0450
                100.00         139.54        0.0350      Main Channel
                110.00         139.97        0.0450
                120.00         140.53        0.0450
                130.00         140.63        0.0450
                140.00         140.72        0.0450
                150.00         140.87        0.0450
                190.00         141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   139.63    .150E+03       0.1         0.18      43.53
        0.17   139.71    .598E+03       0.4         0.30      27.01
        0.26   139.80    .126E+04       1.1         0.42      19.24
        0.34   139.88    .209E+04       2.2         0.52      15.58
        0.43   139.97    .307E+04       3.8         0.60      13.36
        0.51   140.05    .420E+04       6.1         0.70      11.45
        0.60   140.14    .548E+04       9.0         0.79      10.19
        0.68   140.22    .714E+04      11.3         0.76      10.55
        0.77   140.31    .919E+04      15.7         0.82       9.77
        0.85   140.39    .115E+05      21.0         0.88       9.11
        0.94   140.48    .141E+05      27.4         0.94       8.54
        1.02   140.56    .169E+05      34.6         0.99       8.12
        1.11   140.65    .205E+05      41.1         0.97       8.32
        1.19   140.74    .248E+05      51.5         1.00       8.02
        1.28   140.82    .296E+05      64.0         1.04       7.70
        1.36   140.91    .348E+05      78.0         1.08       7.44
        1.45   140.99    .407E+05      93.6         1.11       7.24
        1.53   141.08    .472E+05     111.7         1.14       7.05
        1.62   141.16    .545E+05     132.2         1.17       6.87

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50080)  314.94     4.64     1.08   10.39      0.46      0.63
   OUTFLOW: ID= 1 ( 60080)  314.94     3.68     1.17   10.39      0.42      0.59


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| CALIB            |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.99          3.46
     Dep. Storage     (mm)=        2.00          9.68
     Average Slope     (%)=        2.40          2.40
     Length            (m)=      172.19         99.00
     Mannings n           =       0.015         0.370

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.44
                over (min)       10.00        70.00
     Storage Coeff.  (min)=       4.21 (ii)   68.55 (ii)
     Unit Hyd. Tpeak (min)=       5.00        70.00
     Unit Hyd. peak  (cms)=       0.24         0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.01          0.072 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.08           1.00
     RUNOFF VOLUME    (mm)=      20.90         2.44           4.98
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.11           0.22

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40090):     4.45   0.072     1.00     4.98
      + ID2= 2 ( 60080):   314.94   3.681     1.17    10.39
        ================================================
        ID = 3 ( 50090):   319.39   3.694     1.17    10.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         138.71        0.0450
                  4.00         136.97        0.0450
                 28.00         135.94        0.0450
                 32.00         135.79        0.0350      Main Channel
                 36.00         135.23        0.0350      Main Channel
                 40.00         135.71    0.0350 /0.0450  Main Channel
                 54.00         136.96        0.0450
                 80.00         138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   135.39    .631E+02       0.1         0.44      12.42
        0.31   135.55    .253E+03       0.5         0.69       7.83
        0.47   135.71    .568E+03       1.6         0.91       5.97
        0.65   135.89    .114E+04       4.2         1.20       4.52
        0.84   136.07    .209E+04       8.7         1.35       4.02
        1.02   136.25    .342E+04      15.4         1.47       3.70
        1.20   136.44    .511E+04      24.8         1.58       3.44
        1.38   136.62    .718E+04      37.2         1.69       3.21
        1.57   136.80    .962E+04      53.1         1.79       3.02
        1.75   136.98    .124E+05      72.7         1.90       2.85
        1.93   137.17    .155E+05      97.8         2.05       2.64
        2.11   137.35    .188E+05     127.1         2.20       2.47
        2.30   137.53    .223E+05     160.4         2.34       2.31
        2.48   137.71    .259E+05     197.8         2.48       2.19
        2.66   137.90    .298E+05     239.5         2.61       2.07
        2.85   138.08    .339E+05     285.4         2.74       1.98
        3.03   138.26    .381E+05     335.6         2.86       1.89
        3.21   138.44    .426E+05     390.3         2.98       1.82
        3.39   138.63    .472E+05     449.4         3.10       1.75

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50090)  319.39     3.69     1.17   10.32      0.62      1.13
   OUTFLOW: ID= 1 ( 60100)  319.39     3.60     1.25   10.32      0.61      1.11


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--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       12.46         14.44
     Dep. Storage     (mm)=        2.00          6.20
     Average Slope     (%)=        1.40          1.40
     Length            (m)=      423.45        125.00
     Mannings n           =       0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         4.41
                over (min)       10.00        70.00
     Storage Coeff.  (min)=       8.50 (ii)   66.53 (ii)
     Unit Hyd. Tpeak (min)=      10.00        70.00
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```
      Unit Hyd. peak  (cms)=       0.12         0.02
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.24         0.09          1.249 (iii)
      TIME TO PEAK    (hrs)=       1.00         2.00           1.00
      RUNOFF VOLUME    (mm)=      20.90         4.47          11.44
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.20           0.50

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40100):    26.90   1.249     1.00    11.44
      + ID2= 2 ( 60100):   319.39   3.597     1.25    10.32
        ==========================================
        ID = 3 ( 50110):   346.28   4.048     1.17    10.41

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area     (ha)=  44.60   Curve Number    (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   3.961

      PEAK FLOW       (cms)=   0.370 (i)
      TIME TO PEAK    (hrs)=   1.333
      RUNOFF VOLUME    (mm)=   2.997
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.131

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area     (ha)=  63.82   Curve Number    (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   4.875

      PEAK FLOW       (cms)=   0.537 (i)
      TIME TO PEAK    (hrs)=   1.417
      RUNOFF VOLUME    (mm)=   3.440
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.150

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   0.370     1.33     3.00
      + ID2= 2 ( 40130):    63.82   0.537     1.42     3.44
        ==========================================
        ID = 3 ( 50130):   108.42   0.898     1.33     3.26

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         155.27        0.0450
                    2.00         155.23        0.0450
                    4.00         155.21        0.0450
                    6.00         155.08        0.0450
                    8.00         154.94        0.0450
                   10.00         154.68        0.0450
                   12.00         154.21        0.0450
                   14.00         153.90        0.0450
                   16.00         153.41        0.0350      Main Channel
                   18.00         153.58        0.0350      Main Channel
                   20.00         153.72    0.0350 /0.0450  Main Channel
                   22.00         153.77        0.0450
                   24.00         153.77        0.0450
                   26.00         153.82        0.0450
                   28.00         153.79        0.0450
                   30.00         153.87        0.0450
                   32.00         153.99        0.0450
                   34.00         154.44        0.0450
                   36.00         154.86        0.0450
                   40.00         155.37        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.10   153.50    .107E+03       0.0         0.27       87.23
         0.20   153.60    .429E+03       0.1         0.42       55.65
         0.29   153.70    .991E+03       0.4         0.55       42.98
         0.39   153.80    .201E+04       0.9         0.66       35.52
         0.49   153.90    .408E+04       2.1         0.71       33.15
         0.59   153.99    .651E+04       3.7         0.81       29.01
         0.69   154.09    .916E+04       6.1         0.93       25.22
         0.79   154.19    .120E+05       8.9         1.05       22.39
         0.88   154.29    .149E+05      12.3         1.16       20.20
         0.98   154.39    .179E+05      16.2         1.27       18.49
         1.08   154.49    .211E+05      20.5         1.37       17.13
         1.18   154.58    .244E+05      25.4         1.47       16.02
         1.28   154.68    .278E+05      30.7         1.56       15.10
         1.37   154.78    .314E+05      36.4         1.63       14.38
         1.47   154.88    .351E+05      42.5         1.71       13.77
         1.57   154.98    .391E+05      48.9         1.76       13.33
         1.67   155.07    .433E+05      55.6         1.81       12.98
         1.77   155.17    .478E+05      63.0         1.86       12.65
         1.86   155.27    .528E+05      69.8         1.86       12.62

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)   108.42     0.90     1.33     3.26      0.38      0.65
   OUTFLOW: ID= 1 ( 60130)   108.42     0.55     1.83     3.25      0.32      0.58


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--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area     (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       46.69         19.07
      Dep. Storage     (mm)=        2.00          6.30
      Average Slope     (%)=        1.30          1.30
      Length            (m)=      662.12         66.00
      Mannings n             =      0.015         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         10.73
                over (min)        10.00         45.00
      Storage Coeff.  (min)=      11.36 (ii)    40.31 (ii)
      Unit Hyd. Tpeak (min)=      10.00         45.00
      Unit Hyd. peak  (cms)=       0.10          0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.06          0.26          4.125 (iii)
      TIME TO PEAK    (hrs)=       1.00          1.58           1.00
      RUNOFF VOLUME    (mm)=      20.90          4.83          14.63
      TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
      RUNOFF COEFFICIENT   =       0.91          0.21           0.64

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76   4.125     1.00    14.63
      + ID2= 2 ( 60130):   108.42   0.546     1.83     3.25
        ==========================================
        ID = 3 ( 50180):   174.18   4.152     1.00     7.55

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| STANDHYD ( 40180)|   Area     (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       10.55          3.33
      Dep. Storage     (mm)=        2.00          6.90
      Average Slope     (%)=        1.00          1.00
      Length            (m)=      304.26         66.00
      Mannings n             =      0.015         0.310

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60          5.11
                over (min)        10.00         55.00
      Storage Coeff.  (min)=       7.71 (ii)    51.57 (ii)
      Unit Hyd. Tpeak (min)=      10.00         55.00
      Unit Hyd. peak  (cms)=       0.13          0.02
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.12          0.02          1.119 (iii)
      TIME TO PEAK    (hrs)=       1.00          1.75           1.00
      RUNOFF VOLUME    (mm)=      20.90          3.82          16.29
      TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
      RUNOFF COEFFICIENT   =       0.91          0.17           0.71

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area     (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=        5.74          8.05
      Dep. Storage     (mm)=        2.00          8.12
      Average Slope     (%)=        2.40          2.40
      Length            (m)=      303.13        131.00
      Mannings n             =      0.015         0.350

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
```

```
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.61
                over (min)        5.00        80.00
     Storage Coeff.  (min)=       5.91 (ii)   77.53 (ii)
     Unit Hyd. Tpeak (min)=       5.00        80.00
     Unit Hyd. peak  (cms)=       0.19         0.01
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.61         0.03          0.612 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.25          1.00
     RUNOFF VOLUME    (mm)=      20.90         2.74          9.76
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.12          0.43

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.90        0.0450
                   1.00        154.69        0.0450
                   2.00        154.30        0.0450
                   3.00        154.00    0.0450 /0.0350  Main Channel
                   4.00        153.74        0.0350      Main Channel
                   5.00        153.51        0.0350      Main Channel
                   6.00        153.46        0.0350      Main Channel
                   7.00        153.77        0.0350      Main Channel
                   8.00        154.10    0.0350 /0.0450  Main Channel
                   9.00        154.50        0.0450
                  10.00        154.84        0.0450
                  11.00        155.13        0.0450
                  12.00        155.26        0.0450
                  13.00        155.32        0.0450
                  14.00        155.42        0.0450
                  15.00        155.52        0.0450
                  16.00        155.62        0.0450
                  17.00        155.69        0.0450
                  18.00        155.76        0.0450
                  20.00        155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.11   153.57    .445E+02       0.0         0.32       21.18
       0.22   153.68    .135E+03       0.2         0.51       13.45
       0.33   153.79    .262E+03       0.4         0.66       10.46
       0.43   153.89    .423E+03       0.8         0.79        8.73
       0.54   154.00    .616E+03       1.3         0.90        7.61
       0.68   154.14    .900E+03       2.4         1.09        6.30
       0.81   154.27    .123E+04       3.8         1.27        5.40
       0.95   154.41    .160E+04       5.5         1.42        4.83
       1.08   154.54    .201E+04       7.6         1.55        4.43
       1.22   154.68    .246E+04       9.9         1.67        4.12
       1.35   154.81    .294E+04      12.7         1.78        3.86
       1.48   154.94    .345E+04      15.8         1.88        3.65
       1.62   155.08    .400E+04      19.2         1.97        3.48
       1.75   155.21    .458E+04      22.9         2.05        3.34
       1.89   155.35    .524E+04      26.8         2.11        3.26
       2.02   155.48    .599E+04      31.4         2.16        3.18
       2.16   155.62    .682E+04      36.5         2.20        3.12
       2.29   155.75    .774E+04      41.9         2.23        3.08
       2.43   155.89    .878E+04      48.0         2.25        3.05

                                  <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.  MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     0.61    1.00    9.76      0.38      0.71
   OUTFLOW: ID= 1 ( 60190)   13.78     0.55    1.00    9.75      0.36      0.69


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      17.41         5.53
     Dep. Storage     (mm)=       2.00         6.75
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     391.08       150.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.27
                over (min)        5.00        70.00
     Storage Coeff.  (min)=       6.44 (ii)   65.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        70.00
     Unit Hyd. peak  (cms)=       0.18         0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.95         0.03          1.954 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.00          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.41         16.48
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.15          0.72

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40180):    13.89    1.119     1.00    16.29
      + ID2= 2 ( 40200):    22.94    1.954     1.00    16.48
        ================================================
        ID = 3 ( 50200):    36.83    3.073     1.00    16.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50200):    36.83    3.073     1.00    16.41
      + ID2= 2 ( 60190):    13.78    0.546     1.00     9.75
        ================================================
        ID = 1 ( 50200):    50.61    3.619     1.00    14.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.01         1.06
     Dep. Storage     (mm)=       2.00         6.27
     Average Slope     (%)=       0.90         0.90
     Length            (m)=     201.21       118.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.33
                over (min)        5.00        80.00
     Storage Coeff.  (min)=       6.21 (ii)   79.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00        80.00
     Unit Hyd. peak  (cms)=       0.19         0.01
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.57         0.00          0.567 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.17          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.49         17.72
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.15          0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40210):     6.07    0.567     1.00    17.72
      + ID2= 2 ( 50200):    50.61    3.619     1.00    14.60
        ================================================
        ID = 3 ( 50210):    56.68    4.186     1.00    14.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        152.62        0.0450
                   7.00        152.39        0.0450
                   8.00        152.02        0.0450
                   9.00        151.48        0.0450
                  10.00        151.01        0.0450
                  11.00        150.56    0.0450 /0.0350  Main Channel
                  12.00        150.38        0.0350      Main Channel
                  13.00        150.40        0.0350      Main Channel
                  14.00        150.36        0.0350      Main Channel
                  15.00        150.60    0.0350 /0.0450  Main Channel
                  16.00        150.99        0.0450
                  17.00        151.50        0.0450
                  18.00        151.91        0.0450
                  19.00        152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.10   150.46    .580E+02       0.1         0.30       17.06
       0.20   150.56    .160E+03       0.3         0.48       10.57
       0.32   150.68    .314E+03       0.7         0.70        7.18
       0.44   150.80    .489E+03       1.4         0.89        5.71
       0.56   150.92    .686E+03       2.3         1.03        4.89
       0.69   151.04    .904E+03       3.5         1.16        4.35
       0.81   151.16    .114E+04       4.8         1.28        3.95
       0.93   151.29    .140E+04       6.4         1.38        3.66
       1.05   151.41    .167E+04       8.1         1.48        3.42
       1.17   151.53    .196E+04      10.1         1.57        3.22
       1.29   151.65    .227E+04      12.3         1.65        3.06
       1.41   151.77    .260E+04      14.8         1.73        2.93
       1.54   151.89    .295E+04      17.5         1.80        2.81
       1.66   152.01    .331E+04      20.4         1.87        2.70
       1.78   152.13    .369E+04      23.6         1.94        2.61
       1.90   152.26    .409E+04      27.0         2.00        2.52
       2.02   152.38    .451E+04      30.7         2.06        2.45
       2.14   152.50    .500E+04      33.4         2.03        2.49
       2.26   152.62    .563E+04      37.3         2.01        2.51

                                  <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.  MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50210)   56.68     4.19    1.00   14.93      0.75      1.22
   OUTFLOW: ID= 1 ( 60210)   56.68     4.08    1.00   14.93      0.74      1.21


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.91         2.40
     Dep. Storage     (mm)=       2.00         6.17
     Average Slope     (%)=       0.60         0.60
     Length            (m)=     274.66        79.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.50
                over (min)       10.00        75.00
     Storage Coeff.  (min)=       8.45 (ii)   72.14 (ii)
```

```
     Unit Hyd. Tpeak (min)=      10.00        75.00
     Unit Hyd. peak  (cms)=       0.12         0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.95         0.01          0.955 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.08           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.64          17.06
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.16           0.74

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40220):    11.32   0.955     1.00    17.06
      + ID2= 2 ( 60210):    56.68   4.078     1.00    14.93
        ====================================================
        ID = 3 ( 50120):    68.00   5.033     1.00    15.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50120):    68.00   5.033     1.00    15.28
      + ID2= 2 ( 50180):   174.18   4.152     1.00     7.55
        ====================================================
        ID = 3 ( 50140):   242.18   9.185     1.00     9.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.29        0.0450
                   2.00         152.20        0.0450
                   4.00         152.17        0.0450
                   6.00         152.15        0.0450
                   8.00         151.78        0.0450
                  10.00         151.28        0.0450
                  12.00         150.79        0.0450
                  14.00         150.20    0.0450 /0.0350  Main Channel
                  16.00         149.82        0.0350      Main Channel
                  18.00         149.51        0.0350      Main Channel
                  20.00         149.24        0.0350      Main Channel
                  22.00         149.48        0.0350      Main Channel
                  24.00         150.00    0.0350 /0.0450  Main Channel
                  26.00         150.52        0.0450
                  28.00         151.14        0.0450
                  30.00         151.68        0.0450
                  32.00         152.11        0.0450
                  34.00         152.20        0.0450
                  35.00         152.27        0.0450
                  38.00         152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.15    149.39    .694E+02        0.1        0.32      19.63
       0.31    149.54    .273E+03        0.4        0.53      11.92
       0.46    149.70    .577E+03        1.1        0.72       8.87
       0.61    149.85    .972E+03        2.2        0.87       7.30
       0.76    150.00    .145E+04        3.9        1.01       6.26
       0.93    150.16    .205E+04        6.4        1.18       5.36
       1.09    150.33    .274E+04        9.9        1.37       4.62
       1.25    150.49    .350E+04       14.2        1.54       4.11
       1.42    150.65    .434E+04       19.3        1.69       3.75
       1.58    150.82    .524E+04       25.2        1.83       3.47
       1.74    150.98    .621E+04       31.8        1.95       3.26
       1.91    151.14    .726E+04       39.2        2.06       3.09
       2.07    151.31    .839E+04       47.5        2.16       2.94
       2.23    151.47    .959E+04       56.6        2.25       2.82
       2.40    151.63    .109E+05       66.7        2.34       2.72
       2.56    151.80    .122E+05       77.6        2.41       2.63
       2.72    151.96    .137E+05       89.3        2.48       2.55
       2.89    152.12    .153E+05      102.0        2.55       2.49
       3.05    152.29    .172E+05      111.6        2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)  242.18     9.19     1.00    9.72      1.06      1.33
   OUTFLOW: ID= 1 ( 60140)  242.18     8.64     1.00    9.72      1.03      1.30


--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         151.02        0.0450
                   2.00         150.89        0.0450
                   4.00         150.73        0.0450
                   6.00         150.65        0.0450
                   8.00         150.38        0.0450
                  10.00         149.93        0.0450
                  12.00         149.51        0.0450
                  14.00         149.02    0.0450 /0.0350  Main Channel
                  16.00         148.64        0.0350      Main Channel
                  18.00         148.27        0.0350      Main Channel
                  20.00         148.39        0.0350      Main Channel
                  22.00         148.60        0.0350      Main Channel
                  24.00         148.94    0.0350 /0.0450  Main Channel
                  26.00         149.34        0.0450
                  28.00         149.66        0.0450
                  30.00         150.12        0.0450
                  32.00         150.45        0.0450
                  34.00         150.52        0.0450
                  36.00         150.60        0.0450
                  38.00         150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.11    148.38    .283E+02        0.0        0.26      13.34
       0.22    148.49    .107E+03        0.2        0.44       7.98
       0.34    148.60    .226E+03        0.6        0.58       6.07
       0.45    148.72    .380E+03        1.3        0.72       4.90
       0.56    148.83    .563E+03        2.2        0.84       4.20
       0.67    148.94    .775E+03        3.5        0.95       3.72
       0.80    149.07    .105E+04        5.5        1.11       3.17
       0.93    149.20    .136E+04        8.2        1.27       2.77
       1.06    149.32    .170E+04       11.3        1.41       2.50
       1.18    149.45    .207E+04       14.9        1.52       2.31
       1.31    149.58    .248E+04       19.1        1.63       2.17
       1.44    149.71    .292E+04       23.8        1.72       2.05
       1.57    149.83    .340E+04       29.1        1.81       1.95
       1.70    149.96    .391E+04       34.9        1.89       1.87
       1.82    150.09    .445E+04       41.4        1.97       1.79
       1.95    150.22    .502E+04       48.4        2.04       1.73
       2.08    150.35    .563E+04       56.0        2.10       1.67
       2.21    150.47    .628E+04       63.9        2.15       1.64
       2.33    150.60    .702E+04       71.1        2.14       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60140)  242.18     8.64     1.00    9.72      0.95      1.29
   OUTFLOW: ID= 1 ( 60150)  242.18     8.70     1.08    9.72      0.95      1.29


--------------------
| CALIB            |
| STANDHYD ( 40150)|   Area     (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        3.11          2.26
     Dep. Storage     (mm)=        2.00          6.34
     Average Slope     (%)=        2.30          2.30
     Length            (m)=      189.18         45.00
     Mannings n           =       0.015         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
       hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
     0.083     0.00 | 1.000    41.60 | 1.917     0.00 |  2.83     1.00
     0.167     0.00 | 1.083     2.60 | 2.000     0.00 |  2.92     1.00
     0.250     0.00 | 1.167     2.60 | 2.083     0.60 |  3.00     1.00
     0.333     0.00 | 1.250     2.60 | 2.167     0.60 |  3.08     0.00
     0.417     0.00 | 1.333     2.60 | 2.250     0.60 |  3.17     0.00
     0.500     0.00 | 1.417     2.60 | 2.333     0.60 |  3.25     0.00
     0.583    41.60 | 1.500     2.60 | 2.417     0.60 |  3.33     0.00
     0.667    41.60 | 1.583     0.00 | 2.500     0.60 |  3.42     0.00
     0.750    41.60 | 1.667     0.00 | 2.583     1.00 |  3.50     0.00
     0.833    41.60 | 1.750     0.00 | 2.667     1.00 |
     0.917    41.60 | 1.833     0.00 | 2.750     1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         10.97
                   over (min)       5.00         25.00
     Storage Coeff.  (min)=       4.51 (ii)    23.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.23          0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.32          0.03          0.338 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.25           1.00
     RUNOFF VOLUME    (mm)=      20.90          4.09          12.85
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.18           0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40150):     5.37   0.338     1.00    12.85
      + ID2= 2 ( 60150):   242.18   8.702     1.08     9.72
        ====================================================
        ID = 3 ( 50160):   247.54   8.846     1.08     9.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40240)|   Area     (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        8.79          1.50
     Dep. Storage     (mm)=        2.00          5.70
     Average Slope     (%)=        3.40          3.40
     Length            (m)=      261.85         70.00
     Mannings n           =       0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
       hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
     0.083     0.00 | 1.000    41.60 | 1.917     0.00 |  2.83     1.00
     0.167     0.00 | 1.083     2.60 | 2.000     0.00 |  2.92     1.00
     0.250     0.00 | 1.167     2.60 | 2.083     0.60 |  3.00     1.00
     0.333     0.00 | 1.250     2.60 | 2.167     0.60 |  3.08     0.00
     0.417     0.00 | 1.333     2.60 | 2.250     0.60 |  3.17     0.00
     0.500     0.00 | 1.417     2.60 | 2.333     0.60 |  3.25     0.00
     0.583    41.60 | 1.500     2.60 | 2.417     0.60 |  3.33     0.00
     0.667    41.60 | 1.583     0.00 | 2.500     0.60 |  3.42     0.00
     0.750    41.60 | 1.667     0.00 | 2.583     1.00 |  3.50     0.00
     0.833    41.60 | 1.750     0.00 | 2.667     1.00 |
     0.917    41.60 | 1.833     0.00 | 2.750     1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          7.61
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       4.88 (ii)    29.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.22          0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.00          0.02          1.010 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.33           1.00
     RUNOFF VOLUME    (mm)=      20.90          3.79          18.31
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.17           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


--------------------
| CALIB            |
| STANDHYD ( 40250)|   Area     (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        8.61          4.75
     Dep. Storage     (mm)=        2.00          7.14
     Average Slope     (%)=        2.00          2.00
     Length            (m)=      298.43         70.00
     Mannings n           =       0.015         0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
       hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
     0.083     0.00 | 1.000    41.60 | 1.917     0.00 |  2.83     1.00
     0.167     0.00 | 1.083     2.60 | 2.000     0.00 |  2.92     1.00
     0.250     0.00 | 1.167     2.60 | 2.083     0.60 |  3.00     1.00
     0.333     0.00 | 1.250     2.60 | 2.167     0.60 |  3.08     0.00
     0.417     0.00 | 1.333     2.60 | 2.250     0.60 |  3.17     0.00
     0.500     0.00 | 1.417     2.60 | 2.333     0.60 |  3.25     0.00
     0.583    41.60 | 1.500     2.60 | 2.417     0.60 |  3.33     0.00
     0.667    41.60 | 1.583     0.00 | 2.500     0.60 |  3.42     0.00
     0.750    41.60 | 1.667     0.00 | 2.583     1.00 |  3.50     0.00
     0.833    41.60 | 1.750     0.00 | 2.667     1.00 |
     0.917    41.60 | 1.833     0.00 | 2.750     1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          3.89
                   over (min)       5.00         50.00
     Storage Coeff.  (min)=       6.19 (ii)    48.15 (ii)
```

```
     Unit Hyd. Tpeak (min)=       5.00        50.00
     Unit Hyd. peak  (cms)=       0.19         0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.96         0.03         0.963 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.75          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.15         14.31
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.14          0.62

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        155.56        0.0450
                    2.00        155.23        0.0450
                    4.00        154.58        0.0450
                    6.00        153.92        0.0450
                    8.00        153.53        0.0450
                   10.00        152.64        0.0450
                   12.00        152.43    0.0450 /0.0350  Main Channel
                   14.00        152.24        0.0350      Main Channel
                   16.00        152.07        0.0350      Main Channel
                   18.00        152.30    0.0350 /0.0450  Main Channel
                   20.00        152.46        0.0450
                   22.00        155.55        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.12  152.18    .895E+02        0.1         0.43      24.33
         0.24  152.30    .356E+03        0.4         0.69      15.20
         0.43  152.49    .118E+04        2.1         1.10       9.55
         0.62  152.68    .234E+04        5.5         1.48       7.09
         0.81  152.88    .361E+04       10.4         1.83       5.76
         1.00  153.07    .494E+04       16.7         2.13       4.94
         1.19  153.26    .634E+04       24.2         2.40       4.38
         1.38  153.45    .781E+04       32.8         2.65       3.97
         1.58  153.64    .936E+04       42.5         2.86       3.67
         1.77  153.83    .110E+05       53.3         3.05       3.45
         1.96  154.02    .128E+05       65.6         3.23       3.26
         2.15  154.21    .147E+05       79.4         3.40       3.09
         2.34  154.40    .167E+05       94.5         3.57       2.95
         2.53  154.60    .188E+05      111.0         3.73       2.82
         2.72  154.79    .209E+05      128.7         3.89       2.71
         2.91  154.98    .231E+05      147.8         4.03       2.61
         3.10  155.17    .255E+05      168.3         4.17       2.52
         3.30  155.36    .279E+05      189.2         4.28       2.46
         3.49  155.55    .305E+05      211.3         4.38       2.40

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40250)    13.36     0.96    1.00  14.31      0.30       0.79
   OUTFLOW: ID= 1 ( 60240)    13.36     0.76    1.00  14.31      0.28       0.75
```

```
--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40240):    10.28    1.010     1.00     18.31
      + ID2= 2 ( 50160):   247.54    8.846     1.08      9.79
        ================================================
        ID = 3 ( 50250):   257.83    9.654     1.00     10.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50250):   257.83    9.654     1.00     10.13
      + ID2= 2 ( 60240):    13.36    0.756     1.00     14.31
        ================================================
        ID = 1 ( 50250):   271.19   10.410     1.00     10.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        149.47        0.0450
                    3.00        149.39        0.0450
                    6.00        149.18        0.0450
                    9.00        148.85        0.0450
                   12.00        148.60        0.0450
                   15.00        148.16        0.0450
                   18.00        147.81        0.0450
                   21.00        147.50        0.0450
                   24.00        147.26        0.0350      Main Channel
                   27.00        146.88        0.0350      Main Channel
                   30.00        146.72        0.0350      Main Channel
                   33.00        147.27    0.0350 /0.0450  Main Channel
                   36.00        147.60        0.0450
                   39.00        147.71        0.0450
                   42.00        148.10        0.0450
                   45.00        148.90        0.0450
                   48.00        149.05        0.0450
                   51.00        149.12        0.0450
                   54.00        149.43        0.0450
                   57.00        149.67        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.14  146.85    .156E+03        0.1         0.30      40.24
         0.27  146.99    .583E+03        0.4         0.51      23.51
         0.41  147.13    .119E+04        1.1         0.68      17.78
         0.54  147.26    .198E+04        2.2         0.82      14.76
         0.69  147.41    .309E+04        4.3         1.02      11.88
         0.84  147.56    .455E+04        7.2         1.15      10.50
         0.98  147.70    .637E+04       10.9         1.24       9.73
         1.13  147.85    .862E+04       15.8         1.32       9.12
         1.28  148.00    .111E+05       21.7         1.41       8.55
         1.42  148.14    .139E+05       28.7         1.50       8.06
         1.57  148.29    .169E+05       37.1         1.59       7.58
         1.72  148.44    .200E+05       46.5         1.68       7.16
         1.87  148.58    .233E+05       57.0         1.77       6.80
         2.01  148.73    .268E+05       68.3         1.85       6.53
         2.16  148.88    .305E+05       80.9         1.92       6.28
         2.31  149.02    .345E+05       93.2         1.95       6.17
         2.45  149.17    .391E+05      106.6         1.97       6.11
         2.60  149.32    .441E+05      123.2         2.02       5.97
         2.75  149.47    .495E+05      139.7         2.04       5.91

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50250)    271.19    10.41    1.00  10.33      0.96       1.23
   OUTFLOW: ID= 1 ( 60250)    271.19     8.59    1.17  10.33      0.89       1.18
```

```
--------------------
| CALIB            |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       15.93         12.52
     Dep. Storage     (mm)=        2.00          6.70
     Average Slope     (%)=        1.30          1.30
     Length            (m)=      435.49         46.00
     Mannings n           =       0.015         0.300

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         11.16
               over (min)        10.00         35.00
     Storage Coeff.  (min)=       8.83 (ii)    32.26 (ii)
     Unit Hyd. Tpeak (min)=      10.00         35.00
     Unit Hyd. peak  (cms)=       0.12          0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.31          0.18         1.374 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.42          1.00
     RUNOFF VOLUME    (mm)=      20.90          4.44         11.52
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.19          0.50

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  ( 50260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40260):    28.45    1.374     1.00     11.52
      + ID2= 2 ( 60250):   271.19    8.590     1.17     10.33
        ================================================
        ID = 3 ( 50260):   299.64    9.494     1.08     10.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        143.17        0.0450
                    4.00        143.15        0.0450
                    8.00        143.14        0.0450
                   12.00        142.95        0.0450
                   16.00        142.87        0.0450
                   20.00        142.67        0.0450
                   24.00        142.24        0.0450
                   28.00        141.84        0.0450
                   32.00        141.61        0.0450
                   36.00        141.32        0.0450
                   40.00        140.98        0.0450
                   44.00        140.88        0.0450
                   48.00        139.95        0.0350      Main Channel
                   52.00        140.09        0.0350      Main Channel
                   56.00        141.11        0.0450
                   60.00        141.43        0.0450
                   76.00        143.21        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.17  140.12    .479E+03        0.2         0.48      36.89
         0.34  140.29    .147E+04        1.2         0.86      20.63
         0.51  140.46    .272E+04        2.9         1.12      15.78
         0.68  140.63    .421E+04        5.3         1.33      13.28
         0.85  140.80    .596E+04        8.5         1.51      11.69
         1.02  140.97    .812E+04       12.0         1.56      11.29
         1.19  141.14    .111E+05       17.6         1.68      10.52
         1.36  141.31    .147E+05       25.4         1.83       9.67
         1.53  141.48    .191E+05       34.9         1.93       9.14
         1.70  141.65    .242E+05       46.4         2.03       8.71
         1.87  141.81    .301E+05       59.9         2.11       8.38
         2.04  141.98    .367E+05       76.6         2.21       7.99
         2.21  142.15    .439E+05       95.9         2.31       7.63
         2.37  142.32    .517E+05      117.9         2.42       7.30
         2.54  142.49    .600E+05      142.7         2.52       7.01
         2.71  142.66    .689E+05      170.3         2.62       6.74
         2.88  142.83    .785E+05      198.2         2.68       6.60
         3.05  143.00    .892E+05      225.9         2.68       6.58
         3.22  143.17    .101E+06      250.7         2.63       6.73

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50260)    299.64     9.49    1.08  10.45      0.90       1.53
   OUTFLOW: ID= 1 ( 60260)    299.64     7.91    1.25  10.45      0.81       1.47
```

```
--------------------
| CALIB            |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        3.12          6.71
     Dep. Storage     (mm)=        2.00          8.03
     Average Slope     (%)=        1.10          1.10
     Length            (m)=      256.01         73.00
     Mannings n           =       0.015         0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          4.56
               over (min)         5.00         60.00
     Storage Coeff.  (min)=       6.75 (ii)    55.96 (ii)
     Unit Hyd. Tpeak (min)=       5.00         60.00
     Unit Hyd. peak  (cms)=       0.18          0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.25          0.04         0.252 (iii)
```

```
      TIME TO PEAK    (hrs)=       1.00         1.92          1.00
      RUNOFF VOLUME    (mm)=      20.90         3.64          7.44
      TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
      RUNOFF COEFFICIENT   =       0.91         0.16          0.32


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40270):     9.83   0.252     1.00     7.44
      + ID2= 2 ( 60260):   299.64   7.907     1.25    10.45
        ================================================
        ID = 3 ( 50270):   309.47   7.965     1.25    10.35

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.16        11.14
      Dep. Storage     (mm)=       2.00         7.27
      Average Slope     (%)=       1.10         1.10
      Length            (m)=     456.83        53.00
      Mannings n           =      0.015        0.310

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         9.34
                   over (min)      10.00        40.00
      Storage Coeff.  (min)=       9.56 (ii)   38.93 (ii)
      Unit Hyd. Tpeak (min)=      10.00        40.00
      Unit Hyd. peak  (cms)=       0.11         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.71         0.14        1.747 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.50         1.00
      RUNOFF VOLUME    (mm)=      20.90         4.15        12.80
      TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
      RUNOFF COEFFICIENT   =       0.91         0.18         0.56


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40280):    31.30   1.747     1.00    12.80
      + ID2= 2 ( 50270):   309.47   7.965     1.25    10.35
        ================================================
        ID = 3 ( 50280):   340.77   8.654     1.25    10.58

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        139.35        0.0450
                   3.00        139.19        0.0450
                   6.00        138.46        0.0450
                  27.00        137.71        0.0450
                  30.00        137.44        0.0350      Main Channel
                  33.00        137.26        0.0350      Main Channel
                  36.00        137.51        0.0350      Main Channel
                  39.00        137.64    0.0350 /0.0450  Main Channel
                  42.00        137.71        0.0450
                  57.00        139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
        0.09  137.35    .361E+02         0.0         0.30       17.09
        0.18  137.44    .145E+03         0.2         0.48       10.76
        0.30  137.55    .369E+03         0.8         0.68        7.57
        0.41  137.67    .717E+03         1.9         0.82        6.28
        0.52  137.78    .124E+04         3.9         0.97        5.27
        0.63  137.89    .192E+04         6.8         1.10        4.67
        0.74  138.00    .273E+04        10.7         1.20        4.25
        0.86  138.11    .369E+04        15.7         1.30        3.93
        0.97  138.23    .480E+04        21.8         1.39        3.67
        1.08  138.34    .605E+04        29.1         1.48        3.46
        1.19  138.45    .745E+04        37.8         1.56        3.28
        1.31  138.56    .895E+04        48.6         1.67        3.07
        1.42  138.68    .105E+05        60.8         1.78        2.88
        1.53  138.79    .121E+05        74.4         1.89        2.71
        1.64  138.90    .138E+05        89.3         1.99        2.57
        1.76  139.01    .155E+05       105.5         2.10        2.44
        1.87  139.13    .172E+05       123.0         2.19        2.33
        1.98  139.24    .190E+05       140.8         2.27        2.25
        2.09  139.35    .209E+05       159.0         2.33        2.20

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77     8.65    1.25  10.58      0.68      1.14
   OUTFLOW: ID= 1 ( 60280)  340.77     8.45    1.33  10.58      0.68      1.14


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       6.71         4.81
      Dep. Storage     (mm)=       2.00         7.99
      Average Slope     (%)=       1.60         1.60
      Length            (m)=     277.19        63.00
      Mannings n           =      0.015        0.340

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         6.53
                   over (min)       5.00        30.00
      Storage Coeff.  (min)=       4.80 (ii)   28.13 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.22         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.25         0.06        0.268 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.42         1.00
      RUNOFF VOLUME    (mm)=      20.90         3.15         7.32
      TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
      RUNOFF COEFFICIENT   =       0.91         0.14         0.32

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17   0.268     1.00     7.32
      + ID2= 2 ( 60300):   352.30   8.441     1.33    10.60
        ================================================
        ID = 3 ( 50340):   361.46   8.521     1.33    10.52
```

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26623>
26624>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
26625> ---------------------------------------------------------------------------
26626>
26627> --------------------
26628> | ADD HYD  ( 50350)|
26629> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
26630> --------------------           (ha)    (cms)    (hrs)     (mm)
26631>         ID1= 1 ( 50110):   346.28   4.048     1.17    10.41
26632>       + ID2= 2 ( 50340):   361.46   8.521     1.33    10.52
26633>         ================================================
26634>         ID = 3 ( 50350):   707.75  12.204     1.33    10.46
26635>
26636>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
26637> ---------------------------------------------------------------------------
26638> --------------------
26639> | ROUTE CHN( 60350)|
26640> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
26641> --------------------
26642>                <------ DATA FOR SECTION (   1.1) ------>
26643>                Distance      Elevation       Manning
26644>                    0.00         134.05        0.0450
26645>                   24.00         133.67        0.0450
26646>                   30.00         131.85        0.0450
26647>                   36.00         131.42        0.0450
26648>                   42.00         130.48        0.0450
26649>                   48.00         130.42        0.0350      Main Channel
26650>                   54.00         130.42        0.0350      Main Channel
26651>                   60.00         130.62        0.0450
26652>                   66.00         130.77        0.0450
26653>                   72.00         131.03        0.0450
26654>                   78.00         131.43        0.0450
26655>                   84.00         131.38        0.0450
26656>                   90.00         131.33        0.0450
26657>                   96.00         131.98        0.0450
26658>                  102.00         133.31        0.0450
26659>                  120.00         133.95        0.0450
26660>
26661>       <---------------------- TRAVEL TIME TABLE ---------------------->
26662>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
26663>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
26664>         0.00   130.42    .133E+02        0.0         0.03     768.63
26665>         0.19   130.61    .383E+04        1.6         0.61      40.07
26666>         0.37   130.79    .994E+04        6.6         0.97      25.18
26667>         0.56   130.98    .179E+05       15.1         1.23      19.81
26668>         0.75   131.16    .272E+05       27.2         1.46      16.72
26669>         0.93   131.35    .377E+05       42.2         1.64      14.88
26670>         1.12   131.54    .521E+05       60.9         1.71      14.26
26671>         1.30   131.72    .683E+05       87.2         1.86      13.07
26672>         1.49   131.91    .857E+05      119.1         2.03      11.99
26673>         1.68   132.09    .104E+06      157.8         2.22      10.96
26674>         1.86   132.28    .122E+06      201.6         2.41      10.11
26675>         2.05   132.47    .141E+06      250.1         2.59       9.41
26676>         2.23   132.65    .160E+06      303.1         2.76       8.82
26677>         2.42   132.84    .180E+06      360.6         2.93       8.32
26678>         2.61   133.02    .200E+06      422.5         3.08       7.90
26679>         2.79   133.21    .221E+06      488.7         3.24       7.53
26680>         2.98   133.40    .242E+06      552.2         3.34       7.29
26681>         3.16   133.58    .264E+06      613.6         3.40       7.17
26682>         3.35   133.77    .288E+06      658.8         3.34       7.30
26683>
26684>                                    <---- hydrograph ---->   <-pipe / channel->
26685>                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
26686>                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
26687>    INFLOW : ID= 2 ( 50350)  707.75    12.20     1.33   10.46      0.50      1.13
26688>    OUTFLOW: ID= 1 ( 60350)  707.75    12.73     1.50   10.46      0.51      1.14
26689>
26690>
26691>
26692> ---------------------------------------------------------------------------
26693> --------------------
26694> | CALIB            |
26695> | NASHYD   (******)|   Area     (ha)=   1.03   Curve Number   (CN)= 85.0
26696> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
26697> --------------------   U.H. Tp(hrs)=   0.24
26698>
26699>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
26700>
26701>                                ---- TRANSFORMED HYETOGRAPH ----
26702>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
26703>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
26704>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
26705>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
26706>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
26707>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
26708>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
26709>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
26710>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
26711>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
26712>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
26713>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
26714>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
26715>
26716>      Unit Hyd Qpeak  (cms)=   0.164
26717>
26718>      PEAK FLOW       (cms)=   0.025 (i)
26719>      TIME TO PEAK    (hrs)=   1.083
26720>      RUNOFF VOLUME    (mm)=   5.359
26721>      TOTAL RAINFALL   (mm)=  22.900
26722>      RUNOFF COEFFICIENT   =   0.234
26723>
26724>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
26725>
26726> ---------------------------------------------------------------------------
26727> --------------------
26728> | CALIB            |
26729> | NASHYD   (******)|   Area     (ha)=   2.22   Curve Number   (CN)= 85.0
26730> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
26731> --------------------   U.H. Tp(hrs)=   0.27
26732>
26733>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
26734>
26735>
26736>                                ---- TRANSFORMED HYETOGRAPH ----
26737>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
26738>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
26739>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
26740>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
26741>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
26742>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
26743>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
26744>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
26745>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
26746>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
26747>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
26748>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
26749>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
26750>
26751>      Unit Hyd Qpeak  (cms)=   0.314
26752>
26753>      PEAK FLOW       (cms)=   0.049 (i)
26754>      TIME TO PEAK    (hrs)=   1.167
26755>      RUNOFF VOLUME    (mm)=   5.362
26756>      TOTAL RAINFALL   (mm)=  22.900
26757>      RUNOFF COEFFICIENT   =   0.234
26758>
26759>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
26760>
26761> ---------------------------------------------------------------------------
26762> --------------------
26763> | CALIB            |
26764> | NASHYD   (******)|   Area     (ha)=   2.67   Curve Number   (CN)= 85.0
26765> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
26766> --------------------   U.H. Tp(hrs)=   0.30
26767>
26768>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
26769>
26770>
26771>                                ---- TRANSFORMED HYETOGRAPH ----
26772>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
26773>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
26774>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
26775>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
26776>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
26777>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
26778>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
26779>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
26780>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
26781>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
26782>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
26783>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
26784>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
26785>
26786>
26787>      Unit Hyd Qpeak  (cms)=   0.340
26788>
26789>      PEAK FLOW       (cms)=   0.055 (i)
26790>      TIME TO PEAK    (hrs)=   1.167
26791>      RUNOFF VOLUME    (mm)=   5.363
26792>      TOTAL RAINFALL   (mm)=  22.900
26793>      RUNOFF COEFFICIENT   =   0.234
26794>
26795>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
26796>
26797> ---------------------------------------------------------------------------
26798>
26799> --------------------
26800> | ADD HYD  (******)|
26801> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
26802> --------------------           (ha)    (cms)    (hrs)     (mm)
26803>         ID1= 1 (******):     2.67   0.055     1.17     5.36
26804>       + ID2= 2 (******):     2.22   0.049     1.17     5.36
26805>         ================================================
26806>         ID = 3 (******):     4.89   0.104     1.17     5.36
26807>
26808>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
26809> ---------------------------------------------------------------------------
26810> --------------------
26811> | DIVERTHYD(******)|
26812> | IN= 1   # OUT= 5 |
26813> --------------------
26814>      Outflow / Inflow  Relationships
26815>
26816>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
26817>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
26818>         0.00     0.00     0.00     0.00     0.00     0.00
26819>         1.00     1.00     0.00     0.00     0.00     2.00
26820>         2.00     2.00     0.00     0.00     0.00     4.00
26821>        10.00    10.00     0.00     0.00     0.00    20.00
26822>
26823>                                 AREA     QPEAK     TPEAK     R.V.
26824>                                 (ha)     (cms)     (hrs)     (mm)
26825>      TOTAL HYD.(ID= 1):        4.89      0.10      1.17     5.36
26826>      ================================================================
26827>      ID= 2  (   2)    :        2.44      0.05      1.17     5.36
26828>      ID= 3  (   2)    :        2.44      0.05      1.17     5.36
26829>      ID= 4  (   2)    :        0.00      0.00      0.00     0.00
26830>      ID= 5  (   2)    :        0.00      0.00      0.00     0.00
26831>      ID= 6  (   2)    :        0.00      0.00      0.00     0.00
26832> ---------------------------------------------------------------------------
26833>
26834> --------------------
26835> | ADD HYD  (******)|
26836> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
26837> --------------------           (ha)    (cms)    (hrs)     (mm)
26838>         ID1= 1 (******):     1.03   0.025     1.08     5.36
26839>       + ID2= 2 (******):     2.44   0.052     1.17     5.36
26840>         ================================================
26841>         ID = 3 (******):     3.48   0.076     1.17     5.36
26842>
26843>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
26844> ---------------------------------------------------------------------------
26845> --------------------
26846> | CALIB            |
26847> | NASHYD   (******)|   Area     (ha)=   4.15   Curve Number   (CN)= 85.0
26848> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
26849> --------------------   U.H. Tp(hrs)=   0.33
26850>
26851>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
26852>
26853>
26854>                                ---- TRANSFORMED HYETOGRAPH ----
26855>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
26856>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
26857>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
26858>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
26859>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
26860>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
26861>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
26862>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
26863>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
26864>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
26865>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
26866>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
26867>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
26868>
26869>      Unit Hyd Qpeak  (cms)=   0.480
26870>
26871>      PEAK FLOW       (cms)=   0.079 (i)
26872>      TIME TO PEAK    (hrs)=   1.167
26873>      RUNOFF VOLUME    (mm)=   5.363
26874>      TOTAL RAINFALL   (mm)=  22.900
26875>      RUNOFF COEFFICIENT   =   0.234
26876>
26877>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
26878>
26879> ---------------------------------------------------------------------------
26880> --------------------
26881> | CALIB            |
26882> | NASHYD   (******)|   Area     (ha)=   0.26   Curve Number   (CN)= 85.0
26883> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
26884> --------------------   U.H. Tp(hrs)=   0.14
26885>
26886>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
26887>
26888>
26889>                                ---- TRANSFORMED HYETOGRAPH ----
26890>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
26891>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
26892>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
26893>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
26894>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
26895>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
26896>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
26897>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
26898>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
26899>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
26900>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
26901>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
26902>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
26903>
26904>      Unit Hyd Qpeak  (cms)=   0.071
26905>
26906>      PEAK FLOW       (cms)=   0.009 (i)
26907>      TIME TO PEAK    (hrs)=   1.000
26908>      RUNOFF VOLUME    (mm)=   5.324
26909>      TOTAL RAINFALL   (mm)=  22.900
26910>      RUNOFF COEFFICIENT   =   0.232
26911>
26912>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
26913>
26914> ---------------------------------------------------------------------------
26915>
26916> --------------------
26917> | ADD HYD  (******)|
26918> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
26919> --------------------           (ha)    (cms)    (hrs)     (mm)
26920>         ID1= 1 (******):     4.15   0.079     1.17     5.36
26921>       + ID2= 2 (******):     0.26   0.009     1.00     5.32
26922>         ================================================
26923>         ID = 3 (******):     4.41   0.084     1.17     5.36
26924>
26925>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
26926> ---------------------------------------------------------------------------
26927>
26928> --------------------
```

```
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.41   0.084     1.17     5.36
      + ID2= 2 (******):     3.48   0.076     1.17     5.36
        ==================================================
        ID = 1 (******):     7.89   0.159     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.78   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.199

     PEAK FLOW       (cms)=   0.026 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.334
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.233

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.14   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.292

     PEAK FLOW       (cms)=   0.046 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.362
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.67   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.122

     PEAK FLOW       (cms)=   0.018 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.356
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.47   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.170

     PEAK FLOW       (cms)=   0.028 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.363
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.67   0.018     1.08     5.36
      + ID2= 2 (******):     2.14   0.046     1.17     5.36
        ==================================================
        ID = 3 (******):     2.81   0.063     1.08     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.81   0.063     1.08     5.36
      + ID2= 2 (******):     0.78   0.026     1.00     5.33
        ==================================================
        ID = 1 (******):     3.59   0.086     1.08     5.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     3.59   0.086     1.08     5.35
      + ID2= 2 (******):     1.47   0.028     1.17     5.36
        ==================================================
        ID = 3 (******):     5.06   0.112     1.08     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     7.89   0.159     1.17     5.36
      + ID2= 2 (******):     5.06   0.112     1.08     5.36
        ==================================================
        ID = 3 ( 50360):    12.95   0.266     1.08     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50360):    12.95   0.266     1.08     5.36
      + ID2= 2 ( 60350):   707.75  12.732     1.50    10.46
        ==================================================
        ID = 1 ( 50360):   720.69  12.869     1.50    10.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.30        0.0450
                   6.00         127.39        0.0450
                  12.00         127.46        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04        0.0450
                  72.00         123.15        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)         (m/s)      (min)
        0.09  122.98    .246E+03        0.4          0.31      10.02
        0.33  123.21    .251E+04       11.8          0.86       3.57
        0.56  123.45    .538E+04       39.9          1.37       2.25
        0.80  123.68    .842E+04       81.1          1.78       1.73
        1.04  123.92    .116E+05      134.5          2.13       1.44
        1.27  124.16    .150E+05      200.0          2.46       1.25
        1.51  124.39    .185E+05      278.3          2.78       1.11
        1.74  124.63    .220E+05      367.4          3.08       1.00
        1.98  124.86    .257E+05      466.7          3.35       0.92
        2.22  125.10    .294E+05      576.1          3.61       0.85
        2.45  125.34    .332E+05      695.4          3.86       0.80
        2.69  125.57    .371E+05      824.8          4.10       0.75
        2.92  125.81    .410E+05      963.8          4.33       0.71
        3.16  126.04    .451E+05     1112.3          4.55       0.68
        3.39  126.28    .492E+05     1270.1          4.76       0.65
        3.63  126.51    .534E+05     1437.3          4.97       0.62
        3.87  126.75    .576E+05     1613.7          5.16       0.60
        4.10  126.99    .620E+05     1791.1          5.33       0.58
        4.34  127.22    .665E+05     1970.4          5.47       0.56

                                      <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)  720.69    12.87     1.50   10.37      0.34      0.87
   OUTFLOW: ID= 1 ( 60390)  720.69    14.34     1.58   10.37      0.35      0.89


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   0.379 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   3.507
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.153

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  ( 50390)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   0.379     1.08     3.51
      + ID2= 2 ( 60390):   720.69  14.341     1.58    10.37
        ================================================
        ID = 3 ( 50390):   741.24  14.420     1.58    10.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area    (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83         6.10
     Dep. Storage     (mm)=       2.00         6.08
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     345.74        42.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        18.63
               over (min)        5.00        25.00
     Storage Coeff.  (min)=      7.37 (ii)   23.98 (ii)
     Unit Hyd. Tpeak (min)=      5.00        25.00
     Unit Hyd. peak  (cms)=      0.17         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=      1.06         0.15       1.135 (iii)
     TIME TO PEAK    (hrs)=      1.00         1.25       1.00
     RUNOFF VOLUME    (mm)=     20.90         5.62      13.62
     TOTAL RAINFALL   (mm)=     22.90        22.90      22.90
     RUNOFF COEFFICIENT   =      0.91         0.25       0.59

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.70        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04    0.0450 /0.0350  Main Channel
                  72.00         122.86        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  122.98    .275E+03       0.7         0.35       6.78
        0.36  123.21    .218E+04      14.7         0.95       2.47
        0.59  123.45    .437E+04      44.6         1.44       1.63
        0.83  123.68    .670E+04      87.2         1.84       1.28
        1.06  123.92    .916E+04     141.6         2.19       1.08
        1.30  124.16    .117E+05     208.1         2.51       0.94
        1.54  124.39    .144E+05     287.0         2.82       0.84
        1.77  124.63    .171E+05     376.7         3.11       0.76
        2.01  124.86    .199E+05     476.5         3.38       0.70
        2.24  125.10    .228E+05     586.1         3.64       0.65
        2.48  125.33    .257E+05     705.6         3.88       0.61
        2.71  125.57    .287E+05     835.1         4.12       0.57
        2.95  125.80    .317E+05     974.0         4.35       0.54
        3.19  126.04    .348E+05    1122.3         4.56       0.52
        3.42  126.28    .379E+05    1279.8         4.77       0.49
        3.66  126.51    .411E+05    1446.6         4.97       0.47
        3.89  126.75    .444E+05    1622.6         5.17       0.46
        4.13  126.98    .477E+05    1786.6         5.29       0.45
        4.36  127.22    .513E+05    1942.9         5.36       0.44

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     1.14    1.00  13.62      0.13      0.36
   OUTFLOW: ID= 1 ( 60370)   17.93     1.02    1.00  13.62      0.13      0.35


--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   741.24  14.420     1.58    10.18
      + ID2= 2 ( 60370):    17.93   1.015     1.00    13.62
        ================================================
        ID = 3 ( 50400):   759.17  14.634     1.58    10.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         125.01        0.0450
                  20.00         123.70        0.0450
                  25.00         123.04        0.0450
                  30.00         120.84        0.0450
                  35.00         119.81    0.0450 /0.0350  Main Channel
                  40.00         119.74        0.0350      Main Channel
                  65.00         120.12        0.0450
                  90.00         120.58        0.0450
                 100.00         125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.07  119.81    .209E+03       0.1         0.27      34.81
        0.35  120.09    .326E+04       4.7         0.83      11.50
        0.62  120.36    .916E+04      21.3         1.34       7.16
        0.90  120.63    .176E+05      51.5         1.68       5.69
        1.17  120.91    .270E+05      96.6         2.05       4.67
        1.44  121.18    .367E+05     153.8         2.41       3.98
        1.72  121.46    .466E+05     222.1         2.74       3.50
        1.99  121.73    .567E+05     300.7         3.05       3.14
        2.26  122.00    .669E+05     389.1         3.34       2.87
        2.54  122.28    .774E+05     487.1         3.62       2.65
        2.81  122.55    .880E+05     594.2         3.88       2.47
        3.09  122.82    .988E+05     710.4         4.13       2.32
        3.36  123.10    .110E+06     834.4         4.36       2.20
        3.63  123.37    .121E+06     964.4         4.57       2.10
        3.91  123.65    .133E+06    1104.4         4.76       2.01
        4.18  123.92    .145E+06    1250.0         4.93       1.94
        4.45  124.19    .159E+06    1406.7         5.09       1.88
        4.73  124.47    .172E+06    1575.5         5.25       1.82
        5.00  124.74    .187E+06    1756.1         5.39       1.77

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  759.17    14.63    1.58  10.26      0.51      1.07
   OUTFLOW: ID= 1 ( 60400)  759.17    11.78    1.67  10.26      0.46      0.99


--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area    (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.24
               over (min)        5.00       240.00
     Storage Coeff.  (min)=      6.33 (ii)  239.89 (ii)
     Unit Hyd. Tpeak (min)=      5.00       240.00
     Unit Hyd. peak  (cms)=      0.19         0.00
                                                      *TOTALS*
     PEAK FLOW       (cms)=      0.23         0.01       0.226 (iii)
     TIME TO PEAK    (hrs)=      1.00         4.92       1.00
     RUNOFF VOLUME    (mm)=     20.90         2.38       7.00
     TOTAL RAINFALL   (mm)=     22.90        22.90      22.90
     RUNOFF COEFFICIENT   =      0.91         0.10       0.31

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40410):     7.92   0.226     1.00     7.00
      + ID2= 2 ( 60400):   759.17  11.776     1.67    10.26
        ================================================
        ID = 3 ( 50410):   767.09  11.780     1.67    10.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.92   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.048 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.359
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.54   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.015 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.354
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234
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      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.697

      PEAK FLOW       (cms)=   0.116 (i)
      TIME TO PEAK    (hrs)=   1.250
      RUNOFF VOLUME    (mm)=   5.364
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.75   0.116     1.25     5.36
      + ID2= 2 (******):     1.01   0.026     1.08     5.36
        ================================================
        ID = 3 (******):     7.76   0.138     1.17     5.36

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.317

      PEAK FLOW       (cms)=   0.049 (i)
      TIME TO PEAK    (hrs)=   1.083
      RUNOFF VOLUME    (mm)=   5.361
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.169

      PEAK FLOW       (cms)=   0.027 (i)
      TIME TO PEAK    (hrs)=   1.167
      RUNOFF VOLUME    (mm)=   5.362
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.24   0.027     1.17     5.36
      + ID2= 2 (******):     2.16   0.049     1.08     5.36
        ================================================
        ID = 3 (******):     3.40   0.075     1.17     5.36

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     3.40   0.075     1.17     5.36
      + ID2= 2 (******):     7.76   0.138     1.17     5.36
        ================================================
        ID = 1 (******):    11.16   0.213     1.17     5.36

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.68   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.341

      PEAK FLOW       (cms)=   0.055 (i)
      TIME TO PEAK    (hrs)=   1.167
      RUNOFF VOLUME    (mm)=   5.363
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.129

      PEAK FLOW       (cms)=   0.018 (i)
      TIME TO PEAK    (hrs)=   1.083
      RUNOFF VOLUME    (mm)=   5.349
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.018     1.08     5.35
      + ID2= 2 (******):     2.44   0.052     1.17     5.36
        ================================================
        ID = 3 (******):     3.06   0.068     1.08     5.36

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.95   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
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TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

Unit Hyd Qpeak (cms)= 0.158

PEAK FLOW (cms)= 0.024 (i)
TIME TO PEAK (hrs)= 1.083
RUNOFF VOLUME (mm)= 5.358
TOTAL RAINFALL (mm)= 22.900
RUNOFF COEFFICIENT = 0.234

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	1.28	Curve Number (CN)=	85.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.25			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

Unit Hyd Qpeak (cms)= 0.196

PEAK FLOW (cms)= 0.030 (i)
TIME TO PEAK (hrs)= 1.083
RUNOFF VOLUME (mm)= 5.360
TOTAL RAINFALL (mm)= 22.900
RUNOFF COEFFICIENT = 0.234

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	1.28	0.030	1.08	5.36
+ ID2= 2 (******):	0.95	0.024	1.08	5.36
ID = 3 (******):	2.23	0.054	1.08	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	2.23	0.054	1.08	5.36
+ ID2= 2 (******):	0.71	0.020	1.08	5.35
ID = 1 (******):	2.94	0.074	1.08	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	2.94	0.074	1.08	5.36
+ ID2= 2 (******):	1.92	0.048	1.08	5.36
ID = 3 (******):	4.86	0.122	1.08	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	4.86	0.122	1.08	5.36
+ ID2= 2 (******):	0.54	0.015	1.08	5.35
ID = 1 (******):	5.40	0.137	1.08	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	5.40	0.137	1.08	5.36
+ ID2= 2 (******):	2.68	0.055	1.17	5.36
ID = 3 (******):	8.08	0.189	1.08	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	8.08	0.189	1.08	5.36
+ ID2= 2 (******):	3.06	0.068	1.08	5.36
ID = 1 (******):	11.13	0.257	1.08	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	11.13	0.257	1.08	5.36
+ ID2= 2 (******):	11.16	0.213	1.17	5.36
ID = 3 (******):	22.30	0.459	1.17	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	1.24	Curve Number (CN)=	85.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.24			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

Unit Hyd Qpeak (cms)= 0.197

PEAK FLOW (cms)= 0.030 (i)
TIME TO PEAK (hrs)= 1.083
RUNOFF VOLUME (mm)= 5.359
TOTAL RAINFALL (mm)= 22.900
RUNOFF COEFFICIENT = 0.234

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	1.05	Curve Number (CN)=	85.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.23			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

Unit Hyd Qpeak (cms)= 0.174

PEAK FLOW (cms)= 0.026 (i)
TIME TO PEAK (hrs)= 1.083
RUNOFF VOLUME (mm)= 5.358
TOTAL RAINFALL (mm)= 22.900
RUNOFF COEFFICIENT = 0.234

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	18.31	Curve Number (CN)=	85.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.48			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

Unit Hyd Qpeak (cms)= 1.457

PEAK FLOW (cms)= 0.254 (i)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 5.365
TOTAL RAINFALL (mm)= 22.900
RUNOFF COEFFICIENT = 0.234

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	1.05	0.026	1.08	5.36
+ ID2= 2 (******):	18.31	0.254	1.33	5.36
ID = 3 (******):	19.36	0.269	1.33	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	19.36	0.269	1.33	5.36
+ ID2= 2 (******):	1.24	0.030	1.08	5.36
ID = 1 (******):	20.60	0.289	1.25	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	22.30	0.459	1.17	5.36
+ ID2= 2 (******):	20.60	0.289	1.25	5.36
ID = 3 (******):	42.90	0.731	1.17	5.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (40420)	Area (ha)=	67.57			
ID= 1 DT= 5.0 min	Total Imp(%)=	31.00	Dir. Conn.(%)=	25.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	20.95	46.62
Dep. Storage (mm)=	2.00	7.70
Average Slope (%)=	1.90	1.90
Length (m)=	671.17	89.00
Mannings n =	0.015	0.240

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00

```
                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         5.00
                over (min)       10.00        50.00
     Storage Coeff.  (min)=      10.22 (ii)   47.69 (ii)
     Unit Hyd. Tpeak (min)=      10.00        50.00
     Unit Hyd. peak  (cms)=       0.11         0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.76         0.33        1.820 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.75         1.00
     RUNOFF VOLUME    (mm)=      20.90         3.54         7.88
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.15         0.34

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):    67.57   1.820     1.00     7.88
      + ID2= 2 (******):    42.90   0.731     1.17     5.36
        ==================================================
        ID = 3 (******):   110.47   2.359     1.00     6.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):   767.09  11.780     1.67    10.23
      + ID2= 2 (******):   110.47   2.359     1.00     6.90
        ==================================================
        ID = 3 ( 50420):   877.56  12.571     1.67     9.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        121.79        0.0450
                  12.00        116.08        0.0450
                  40.00        115.59    0.0450 /0.0350  Main Channel
                  44.00        114.89        0.0350      Main Channel
                  48.00        114.52        0.0350      Main Channel
                  52.00        115.72    0.0350 /0.0450  Main Channel
                  56.00        115.93        0.0450
                  60.00        117.24        0.0450
                  64.00        119.04        0.0450
                  68.00        120.69        0.0450
                  72.00        121.01        0.0450
                  74.00        121.49        0.0450

      <-------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36  114.88    .645E+03       0.7         0.83      14.38
        0.71  115.23    .236E+04       4.6         1.41       8.47
        1.07  115.59    .489E+04      12.6         1.84       6.48
        1.44  115.96    .112E+05      30.9         1.97       6.04
        1.80  116.33    .227E+05      69.1         2.17       5.49
        2.17  116.70    .351E+05     125.6         2.56       4.65
        2.54  117.06    .479E+05     197.5         2.95       4.04
        2.91  117.43    .612E+05     283.9         3.32       3.59
        3.28  117.80    .749E+05     384.1         3.66       3.25
        3.65  118.17    .891E+05     497.4         3.99       2.99
        4.02  118.54    .104E+06     623.5         4.30       2.77
        4.39  118.91    .119E+06     762.2         4.59       2.60
        4.76  119.28    .134E+06     913.1         4.87       2.45
        5.13  119.65    .150E+06    1076.2         5.13       2.32
        5.49  120.02    .166E+06    1251.7         5.38       2.21
        5.86  120.39    .183E+06    1439.5         5.62       2.12
        6.23  120.75    .200E+06    1634.3         5.84       2.04
        6.60  121.12    .219E+06    1831.3         5.99       1.99
        6.97  121.49    .238E+06    2058.5         6.20       1.92

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420)  877.56   12.57    1.67   9.81      1.07      1.84
   OUTFLOW: ID= 1 ( 60420)  877.56   11.58    1.83   9.81      1.02      1.77


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--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.41        11.03
     Dep. Storage     (mm)=       2.00         7.80
     Average Slope     (%)=       3.50         3.50
     Length            (m)=     465.00       102.00
     Mannings n           =      0.015        0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.86
                over (min)        5.00        55.00
     Storage Coeff.  (min)=       6.83 (ii)   51.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00        55.00
     Unit Hyd. peak  (cms)=       0.18         0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.35         0.06        2.361 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.83         1.00
     RUNOFF VOLUME    (mm)=      20.90         3.09        14.49
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.13         0.63

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   2.361     1.00    14.49
      + ID2= 2 ( 60420):   877.56  11.581     1.83     9.81
        ==================================================
        ID = 3 ( 50430):   909.99  11.652     1.83     9.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        116.29        0.0450
                  20.00        114.05        0.0450
                  25.00        110.83        0.0450
                  30.00        109.36        0.0450
                  35.00        108.23    0.0450 /0.0350  Main Channel
                  40.00        107.52        0.0350      Main Channel
                  45.00        108.00    0.0350 /0.0450  Main Channel
                  50.00        107.84        0.0450
                  55.00        108.21        0.0450
                  60.00        108.95        0.0450
                  65.00        109.35        0.0450
                  70.00        109.41        0.0450
                  75.00        109.48        0.0450
                  80.00        109.77        0.0450
                  85.00        112.20        0.0450
                  90.00        115.48        0.0450
                 100.00        116.29        0.0450

      <-------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24  107.76    .285E+03       0.4         0.74      12.74
        0.48  108.00    .146E+04       2.6         1.01       9.32
        0.97  108.49    .695E+04      23.3         1.90       4.97
        1.46  108.97    .141E+05      64.5         2.60       3.63
        1.94  109.46    .233E+05     116.9         2.84       3.33
        2.43  109.95    .371E+05     214.6         3.28       2.88
        2.92  110.44    .519E+05     350.2         3.83       2.47
        3.41  110.92    .675E+05     515.9         4.34       2.18
        3.89  111.41    .836E+05     711.3         4.82       1.96
        4.38  111.90    .100E+06     933.4         5.28       1.79
        4.87  112.39    .117E+06    1182.4         5.71       1.65
        5.35  112.87    .135E+06    1458.0         6.13       1.54
        5.84  113.36    .153E+06    1758.3         6.52       1.45
        6.33  113.85    .171E+06    2082.9         6.90       1.37
        6.82  114.34    .190E+06    2410.6         7.19       1.31
        7.30  114.82    .210E+06    2758.9         7.43       1.27
        7.79  115.31    .232E+06    3143.1         7.68       1.23
        8.28  115.80    .255E+06    3473.3         7.71       1.23
        8.77  116.29    .282E+06    3812.4         7.67       1.23

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  909.99   11.65    1.83   9.97      0.69      1.27
   OUTFLOW: ID= 1 ( 60430)  909.99   10.87    1.92   9.97      0.67      1.25


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--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70        19.42
     Dep. Storage     (mm)=       2.00         6.60
     Average Slope     (%)=       2.50         2.50
     Length            (m)=     617.06        45.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         4.55
                over (min)       10.00        40.00
     Storage Coeff.  (min)=       8.95 (ii)   35.60 (ii)
     Unit Hyd. Tpeak (min)=      10.00        40.00
     Unit Hyd. peak  (cms)=       0.12         0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       3.98         0.12        4.011 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.58         1.00
     RUNOFF VOLUME    (mm)=      20.90         2.69        14.53
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.12         0.63

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40440):    57.11   4.011     1.00    14.53
      + ID2= 2 ( 60430):   909.99  10.866     1.92     9.97
        ==================================================
        ID = 3 ( 50440):   967.10  10.982     1.92    10.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        104.01        0.0450
                  10.00        103.90        0.0450
                  20.00        103.74        0.0450
                  30.00        103.66        0.0450
                  40.00        103.60        0.0450
                  50.00        102.52        0.0450
                  60.00        101.16        0.0450
                  70.00        100.60        0.0450
                  80.00        100.17        0.0450
                  90.00         99.85        0.0450
                 100.00         97.89        0.0350      Main Channel
                 110.00         97.62        0.0350      Main Channel
                 120.00         99.12        0.0450
                 130.00         99.16        0.0450
                 140.00         99.36        0.0450
                 150.00         99.66        0.0450
```

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                160.00         99.68        0.0450
                180.00         99.76        0.0450
                190.00        104.10        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.27   97.89    .102E+04        1.2         0.77      13.74
       0.60   98.21    .381E+04        9.4         1.56       6.74
       0.92   98.53    .738E+04       24.3         2.08       5.05
       1.24   98.86    .117E+05       46.2         2.50       4.22
       1.56   99.18    .171E+05       76.6         2.84       3.71
       1.89   99.50    .264E+05      124.5         2.98       3.53
       2.21   99.82    .403E+05      189.1         2.96       3.56
       2.53  100.15    .597E+05      286.1         3.03       3.48
       2.85  100.47    .809E+05      417.7         3.26       3.23
       3.17  100.79    .104E+06      580.2         3.53       2.98
       3.50  101.11    .128E+06      771.7         3.81       2.77
       3.82  101.44    .153E+06      996.3         4.10       2.57
       4.14  101.76    .179E+06     1248.4         4.40       2.40
       4.46  102.08    .206E+06     1526.4         4.68       2.25
       4.79  102.40    .233E+06     1829.8         4.96       2.13
       5.11  102.73    .261E+06     2156.4         5.22       2.02
       5.43  103.05    .290E+06     2507.0         5.47       1.93
       5.75  103.37    .319E+06     2882.7         5.71       1.85
       6.08  103.69    .350E+06     3194.7         5.77       1.83

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  967.10    10.98    1.92  10.24      0.63      1.60
   OUTFLOW: ID= 1 ( 60440)  967.10    10.97    2.00  10.24      0.63      1.60


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--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37        17.02
     Dep. Storage     (mm)=       2.00         6.90
     Average Slope     (%)=       0.80         0.80
     Length            (m)=     450.16       150.00
     Mannings n           =      0.015        0.300

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.91
                   over (min)      10.00       105.00
     Storage Coeff.  (min)=      10.43 (ii)  104.71 (ii)
     Unit Hyd. Tpeak (min)=      10.00       105.00
     Unit Hyd. peak  (cms)=       0.11         0.01
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.29         0.05       1.295 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.67       1.00
     RUNOFF VOLUME    (mm)=      20.90         3.03      10.35
     TOTAL RAINFALL   (mm)=      22.90        22.90      22.90
     RUNOFF COEFFICIENT   =       0.91         0.13       0.45


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40450):    30.40    1.295     1.00    10.35
     + ID2= 2 ( 60440):   967.10   10.966     2.00    10.24
       ================================================
       ID = 3 ( 50450):   997.50   11.011     2.00    10.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         97.16        0.0450
                  3.00         96.00        0.0450
                  6.00         95.32        0.0450
                  9.00         94.64        0.0450
                 12.00         94.43        0.0450
                 15.00         94.29        0.0450
                 18.00         94.10        0.0350      Main Channel
                 21.00         94.02        0.0350      Main Channel
                 24.00         93.70        0.0350      Main Channel
                 27.00         94.22   0.0350 /0.0450   Main Channel
                 30.00         94.90        0.0450
                 32.00         95.30        0.0450
                 34.00         95.78        0.0450
                 36.00         96.25        0.0450
                 38.00         96.60        0.0450
                 48.00         97.14        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.13   93.83    .942E+02        0.1         0.39      30.45
       0.27   93.96    .377E+03        0.3         0.62      19.18
       0.40   94.09    .911E+03        0.9         0.69      17.28
       0.59   94.29    .230E+04        3.4         1.06      11.15
       0.78   94.48    .428E+04        7.9         1.32       8.98
       0.97   94.67    .679E+04       14.6         1.53       7.74
       1.16   94.86    .963E+04       23.7         1.75       6.77
       1.35   95.05    .127E+05       34.9         1.96       6.07
       1.54   95.24    .160E+05       48.1         2.14       5.54
       1.73   95.43    .196E+05       63.6         2.31       5.13
       1.92   95.62    .233E+05       81.2         2.48       4.79
       2.11   95.81    .273E+05      101.0         2.63       4.51
       2.30   96.00    .315E+05      123.0         2.78       4.27
       2.49   96.19    .360E+05      147.8         2.93       4.06
       2.68   96.38    .406E+05      174.6         3.07       3.87
       2.87   96.57    .454E+05      203.7         3.20       3.71
       3.06   96.76    .505E+05      232.7         3.28       3.62
       3.25   96.95    .562E+05      264.9         3.36       3.54
       3.44   97.14    .624E+05      300.8         3.43       3.46

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450)  997.50    11.01    2.00  10.25      0.87      1.41
   OUTFLOW: ID= 1 ( 60450)  997.50    10.34    2.17  10.25      0.85      1.39


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| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36         7.04
     Dep. Storage     (mm)=       2.00         6.68
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     386.43        40.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.87
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       6.84 (ii)   21.41 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.18         0.05
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.34         0.15       1.415 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.25       1.00
     RUNOFF VOLUME    (mm)=      20.90         4.12      12.98
     TOTAL RAINFALL   (mm)=      22.90        22.90      22.90
     RUNOFF COEFFICIENT   =       0.91         0.18       0.57


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40    1.415     1.00    12.98
     + ID2= 2 ( 60450):   997.50   10.336     2.17    10.25
       ================================================
       ID = 3 ( 50460):  1019.90   10.371     2.17    10.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         91.61        0.0450
                  3.00         91.57        0.0450
                  6.00         91.15        0.0450
                  9.00         90.70        0.0450
                 12.00         89.72        0.0450
                 15.00         88.86        0.0450
                 18.00         88.38   0.0450 /0.0350  Main Channel
                 21.00         87.96        0.0350      Main Channel
                 24.00         88.18   0.0350 /0.0450  Main Channel
                 26.00         88.19        0.0450
                 28.00         88.30        0.0450
                 30.00         90.32        0.0450
                 32.00         90.49        0.0450
                 34.00         90.80        0.0450
                 36.00         90.85        0.0450
                 38.00         90.97        0.0450
                 40.00         91.15        0.0450
                 42.00         91.29        0.0450
                 44.00         91.40        0.0450
                 46.00         91.56        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.11   88.07    .589E+02        0.0         0.34      23.89
       0.21   88.18    .235E+03        0.3         0.54      15.05
       0.41   88.38    .106E+04        1.8         0.85       9.64
       0.61   88.57    .211E+04        5.3         1.22       6.69
       0.81   88.77    .330E+04       10.2         1.51       5.40
       1.01   88.97    .462E+04       16.6         1.76       4.63
       1.21   89.17    .603E+04       24.5         1.99       4.10
       1.41   89.37    .753E+04       33.8         2.19       3.72
       1.61   89.57    .912E+04       44.4         2.38       3.42
       1.81   89.77    .108E+05       56.4         2.56       3.19
       2.00   89.97    .125E+05       69.9         2.72       2.99
       2.20   90.17    .144E+05       84.7         2.88       2.83
       2.40   90.37    .163E+05       99.8         3.00       2.72
       2.60   90.56    .184E+05      114.7         3.04       2.68
       2.80   90.76    .208E+05      132.8         3.13       2.61
       3.00   90.96    .235E+05      148.4         3.09       2.64
       3.20   91.16    .266E+05      170.7         3.13       2.60
       3.40   91.36    .302E+05      194.9         3.16       2.58
       3.60   91.56    .342E+05      223.5         3.20       2.55

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460) 1019.90    10.37    2.17  10.31      0.82      1.52
   OUTFLOW: ID= 1 ( 60460) 1019.90    10.34    2.17  10.31      0.81      1.51


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--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53        30.66
     Dep. Storage     (mm)=       2.00         5.90
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     775.42        40.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        14.11
                   over (min)      10.00        35.00
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      Storage Coeff.  (min)=      12.21 (ii)   30.62 (ii)
      Unit Hyd. Tpeak (min)=      10.00        35.00
      Unit Hyd. peak  (cms)=       0.10         0.04
                                                    *TOTALS*
      PEAK FLOW       (cms)=       4.82         0.47          4.986 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.42           1.00
      RUNOFF VOLUME    (mm)=      20.90         4.43          13.33
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.19           0.58

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  76.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40470):    90.19   4.986     1.00    13.33
      + ID2= 2 ( 60460):  1019.90  10.336     2.17    10.31
        ====================================================
        ID = 3 ( 50470):  1110.09  10.562     2.17    10.55

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         89.19        0.0450
                   2.00         88.89        0.0450
                   4.00         88.54        0.0450
                   6.00         88.31        0.0450
                   8.00         88.14        0.0450
                  10.00         88.02        0.0450
                  12.00         87.99        0.0450
                  14.00         87.90        0.0450
                  16.00         87.84        0.0450
                  19.00         87.55        0.0450
                  22.00         86.85        0.0450
                  25.00         86.23        0.0350      Main Channel
                  28.00         86.23        0.0350      Main Channel
                  31.00         86.60        0.0450
                  34.00         87.49        0.0450
                  37.00         88.15        0.0450
                  41.00         88.21        0.0450
                  45.00         88.29        0.0450
                  48.00         88.36        0.0450
                  50.00         89.13        0.0450

      <-------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01       0.0          0.03     307.39
        0.16   86.38    .381E+03       0.3          0.45      22.82
        0.31   86.54    .942E+03       1.0          0.65      15.77
        0.46   86.69    .167E+04       2.3          0.85      12.10
        0.61   86.84    .253E+04       4.2          1.03       9.95
        0.77   86.99    .350E+04       6.7          1.18       8.66
        0.92   87.15    .458E+04       9.8          1.32       7.78
        1.07   87.30    .576E+04      13.5          1.44       7.13
        1.22   87.45    .706E+04      17.7          1.54       6.63
        1.38   87.60    .847E+04      22.5          1.63       6.28
        1.53   87.76    .101E+05      27.8          1.69       6.05
        1.68   87.91    .119E+05      33.3          1.72       5.97
        1.83   88.06    .142E+05      39.8          1.72       5.96
        1.99   88.21    .170E+05      47.4          1.71       5.97
        2.14   88.36    .206E+05      57.3          1.71       5.99
        2.29   88.52    .247E+05      70.7          1.76       5.81
        2.44   88.67    .289E+05      86.1          1.83       5.59
        2.60   88.82    .332E+05     103.2          1.91       5.36
        2.75   88.97    .376E+05     121.7          1.99       5.15

                                  <---- hydrograph ---->   <-pipe / channel->
                          AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                          (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50470) 1110.09    10.56    2.17  10.55      0.95      1.34
OUTFLOW: ID= 1 ( 60470) 1110.09    10.18    2.33  10.55      0.93      1.33


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| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82         13.61
     Dep. Storage     (mm)=       2.00          5.80
     Average Slope     (%)=       1.90          1.90
     Length            (m)=     613.35         40.00
     Mannings n           =      0.015         0.260

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         28.83
                   over (min)      10.00         25.00
     Storage Coeff.  (min)=       9.68 (ii)    21.75 (ii)
     Unit Hyd. Tpeak (min)=      10.00         25.00
     Unit Hyd. peak  (cms)=       0.11          0.05
                                                    *TOTALS*
     PEAK FLOW       (cms)=       3.51          0.50          3.788 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.25           1.00
     RUNOFF VOLUME    (mm)=      20.90          6.40          14.95
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.28           0.65

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40480):    56.43   3.788     1.00    14.95
      + ID2= 2 ( 60470):  1110.09  10.180     2.33    10.55
        ====================================================
        ID = 3 ( 50480):  1166.52  11.750     1.08    10.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         86.90        0.0450
                   2.00         86.76        0.0450
                   4.00         85.96        0.0450
                   6.00         85.44        0.0450
                   8.00         84.83        0.0450
                  10.00         84.50        0.0450
                  12.00         84.15        0.0450
                  14.00         83.85        0.0350      Main Channel
                  16.00         83.86        0.0350      Main Channel
                  18.00         83.99    0.0350 /0.0450  Main Channel
                  20.00         84.27        0.0450
                  22.00         84.55        0.0450
                  24.00         84.88        0.0450
                  26.00         85.37        0.0450
                  27.00         85.68        0.0450
                  28.00         85.91        0.0450
                  29.00         86.08        0.0450
                  30.00         86.21        0.0450
                  31.00         86.29        0.0450
                  34.00         86.87        0.0450

      <-------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03       0.3          0.48      10.34
        0.32   84.17    .460E+03       1.2          0.77       6.41
        0.48   84.33    .855E+03       2.8          0.98       5.07
        0.64   84.48    .135E+04       5.2          1.14       4.35
        0.80   84.64    .193E+04       8.3          1.28       3.88
        0.95   84.80    .261E+04      12.3          1.40       3.53
        1.11   84.96    .337E+04      17.4          1.53       3.23
        1.27   85.12    .419E+04      23.5          1.66       2.97
        1.43   85.28    .506E+04      30.5          1.79       2.77
        1.59   85.44    .599E+04      38.5          1.90       2.60
        1.75   85.60    .697E+04      47.3          2.01       2.46
        1.91   85.76    .801E+04      57.1          2.12       2.34
        2.07   85.92    .911E+04      67.8          2.21       2.24
        2.23   86.07    .103E+05      79.5          2.30       2.15
        2.39   86.23    .115E+05      91.9          2.37       2.09
        2.54   86.39    .128E+05     105.7          2.45       2.02
        2.70   86.55    .142E+05     121.2          2.53       1.95
        2.86   86.71    .156E+05     138.0          2.62       1.89
        3.02   86.87    .171E+05     153.0          2.65       1.87

                                  <---- hydrograph ---->   <-pipe / channel->
                          AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                          (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50480) 1166.52    11.75    1.08  10.76      0.93      1.38
OUTFLOW: ID= 1 ( 60480) 1166.52    11.60    1.17  10.76      0.93      1.38


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| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60          4.16
     Dep. Storage     (mm)=       2.00          6.22
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     334.28         53.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         21.96
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       7.37 (ii)    25.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.17          0.04
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.14          0.12          1.189 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.33           1.00
     RUNOFF VOLUME    (mm)=      20.90          5.85          14.94
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.26           0.65

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40490):    16.76   1.189     1.00    14.94
      + ID2= 2 ( 60480):  1166.52  11.597     1.17    10.76
        ====================================================
        ID = 3 ( 50490):  1183.28  12.038     1.17    10.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         85.84        0.0450
                   6.00         84.32        0.0450
                  12.00         84.21        0.0450
                  18.00         84.12        0.0450
                  24.00         84.08        0.0450
                  30.00         84.10        0.0450
                  36.00         84.03        0.0450
                  42.00         83.92        0.0450
                  48.00         83.88        0.0450
                  54.00         82.88        0.0350      Main Channel
                  60.00         83.12    0.0350 /0.0450  Main Channel
                  64.00         83.65        0.0450
                  68.00         83.60        0.0450
                  72.00         83.67        0.0450
                  76.00         83.70        0.0450
                  80.00         83.82        0.0450
                  84.00         83.90        0.0450
                  88.00         84.05        0.0450
                  92.00         84.16        0.0450
                 100.00         85.83        0.0450

      <-------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03       0.1          0.32      46.08
        0.31   83.19    .129E+04       0.8          0.57      26.14
        0.47   83.35    .259E+04       2.3          0.79      18.75
        0.62   83.50    .418E+04       4.5          0.96      15.43
```

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        0.78    83.66    .626E+04       7.3          1.04      14.28
        0.93    83.81    .101E+05      11.9          1.05      14.10
        1.09    83.97    .153E+05      17.6          1.02      14.55
        1.24    84.13    .231E+05      26.2          1.00      14.73
        1.40    84.28    .341E+05      41.2          1.07      13.79
        1.55    84.44    .460E+05      61.7          1.19      12.44
        1.71    84.59    .582E+05      86.6          1.32      11.21
        1.86    84.75    .706E+05     115.2          1.45      10.21
        2.02    84.90    .831E+05     147.5          1.57       9.39
        2.17    85.06    .959E+05     183.2          1.70       8.72
        2.33    85.21    .109E+06     222.2          1.81       8.16
        2.48    85.37    .122E+06     264.5          1.93       7.68
        2.64    85.52    .135E+06     310.0          2.03       7.27
        2.79    85.68    .149E+06     358.5          2.14       6.91
        2.95    85.83    .162E+06     410.1          2.24       6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1183.28    12.04    1.17  10.82      0.93      1.05
   OUTFLOW: ID= 1 ( 60490) 1183.28    10.04    1.42  10.82      0.87      1.04


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92         4.72
     Dep. Storage     (mm)=       2.00         5.43
     Average Slope     (%)=       2.10         2.10
     Length            (m)=     370.92        40.00
     Mannings n           =      0.015        0.260

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        28.82
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       6.95 (ii)   18.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.43         0.20        1.568 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.17         1.00
     RUNOFF VOLUME    (mm)=      20.90         6.45        15.30
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.28         0.67

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40810):    20.64   1.568     1.00    15.30
     + ID2= 2 ( 60490):  1183.28  10.036     1.42    10.82
       ==========================================================
       ID = 3 ( 50810):  1203.92  10.287     1.42    10.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         4.48
                   over (min)       5.00        35.00
     Storage Coeff.  (min)=       4.82 (ii)   33.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.22         0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.19         0.05        0.199 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.50         1.00
     RUNOFF VOLUME    (mm)=      20.90         2.47         5.69
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.11         0.25

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40500):     9.32   0.199     1.00     5.69
     + ID2= 2 ( 50810):  1203.92  10.287     1.42    10.90
       ==========================================================
       ID = 3 ( 50500):  1213.24  10.345     1.42    10.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.073 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.363
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.014 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.340
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.233

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.023 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.358
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.38
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       3.09 (ii)    3.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.27         0.27
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.05         0.00        0.052 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.00         1.00
     RUNOFF VOLUME    (mm)=      20.90         5.36        20.74
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.23         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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29377>
29378> ------------------------------------------------------------------------------
29379> --------------------
29380> | CALIB            |
29381> | STANDHYD (******)|   Area    (ha)=  26.50
29382> |ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
29383> --------------------
29384>                              IMPERVIOUS    PERVIOUS (i)
29385>      Surface Area     (ha)=      13.25         13.25
29386>      Dep. Storage     (mm)=       2.00          4.48
29387>      Average Slope     (%)=       2.00          2.00
29388>      Length            (m)=     420.00         30.00
29389>      Mannings n             =     0.013         0.025
29390>
29391>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
29392>
29393>
29394>                                ---- TRANSFORMED HYETOGRAPH ----
29395>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
29396>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
29397>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
29398>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
29399>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
29400>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
29401>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
29402>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
29403>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
29404>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
29405>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
29406>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
29407>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
29408>
29409>      Max.Eff.Inten.(mm/hr)=      41.60         30.05
29410>                  over (min)        5.00         10.00
29411>      Storage Coeff.  (min)=       6.97 (ii)     9.57 (ii)
29412>      Unit Hyd. Tpeak (min)=       5.00         10.00
29413>      Unit Hyd. peak  (cms)=       0.17          0.11
29414>                                                          *TOTALS*
29415>      PEAK FLOW       (cms)=       0.90          0.80          1.699 (iii)
29416>      TIME TO PEAK    (hrs)=       1.00          1.00           1.00
29417>      RUNOFF VOLUME    (mm)=      20.90          7.50          11.52
29418>      TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
29419>      RUNOFF COEFFICIENT   =       0.91          0.33           0.50
29420>
29421>
29422>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
29423>              CN*  =  85.0    Ia = Dep. Storage  (Above)
29424>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
29425>            THAN THE STORAGE COEFFICIENT.
29426>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
29427>
29428> ------------------------------------------------------------------------------
29429> --------------------
29430> | RESERVOIR(******)|     OVERFLOW IS ON
29431> | IN= 2---> OUT= 1 |
29432> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
29433> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
29434>                            0.0000     0.0000   |    1.8600      0.9862
29435>                            0.0560     0.3250   |    2.1000      1.0580
29436>                            0.2600     0.4718   |    2.2000      1.2000
29437>                            0.7400     0.6512   |   10.0000      1.2500
29438>                            1.4100     0.8427   |    0.0000      0.0000
29439>
29440>                                 AREA     QPEAK     TPEAK       R.V.
29441>                                  (ha)     (cms)     (hrs)       (mm)
29442>    INFLOW : ID= 2 (******)     26.500     1.699      1.00      11.52
29443>    OUTFLOW: ID= 1 (******)     26.500     0.047      1.75      11.47
29444>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
29445>
29446>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
29447>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
29448>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
29449>
29450>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.78
29451>                    TIME SHIFT OF PEAK FLOW          (min)= 45.00
29452>                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.2751
29453>
29454> ------------------------------------------------------------------------------
29455>
29456>   --------------------------
29457>   | Junction Command(30651004) |
29458>   --------------------------
29459>
29460>                             AREA     QPEAK   TPEAK     R.V.
29461>                             (ha)     (cms)    (hrs)     (mm)
29462>   INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
29463>   OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00
29464>
29465>   ---------------------------------------------------------------------------
29466>
29467> --------------------
29468> | ADD HYD  (******)|
29469> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
29470> --------------------          (ha)    (cms)    (hrs)     (mm)
29471> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
29472> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
29473>         ID1= 1 (******):    26.50   0.047     1.75    11.47
29474>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
29475>         ================================================
29476>         ID = 3 (******):    26.50   0.047     1.75    11.47
29477>
29478>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
29479> ------------------------------------------------------------------------------
29480> --------------------
29481> | CALIB            |
29482> | STANDHYD (******)|   Area    (ha)=   3.93
29483> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
29484> --------------------
29485>                              IMPERVIOUS    PERVIOUS (i)
29486>      Surface Area     (ha)=       3.89          0.04
29487>      Dep. Storage     (mm)=       2.00          4.48
29488>      Average Slope     (%)=       0.40          1.00
29489>      Length            (m)=     115.50          0.00
29490>      Mannings n             =     0.013         0.030
29491>
29492>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
29493>
29494>
29495>                                ---- TRANSFORMED HYETOGRAPH ----
29496>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
29497>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
29498>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
29499>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
29500>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
29501>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
29502>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
29503>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
29504>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
29505>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
29506>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
29507>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
29508>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
29509>
29510>      Max.Eff.Inten.(mm/hr)=      41.60         16.38
29511>                  over (min)        5.00         10.00
29512>      Storage Coeff.  (min)=       5.21 (ii)     5.21 (ii)
29513>      Unit Hyd. Tpeak (min)=       5.00         10.00
29514>      Unit Hyd. peak  (cms)=       0.21          0.16
29515>                                                          *TOTALS*
29516>      PEAK FLOW       (cms)=       0.45          0.00          0.448 (iii)
29517>      TIME TO PEAK    (hrs)=       1.00          1.00           1.00
29518>      RUNOFF VOLUME    (mm)=      20.90          5.36          20.74
29519>      TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
29520>      RUNOFF COEFFICIENT   =       0.91          0.23           0.91
29521>
29522>
29523>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
29524>              CN*  =  85.0    Ia = Dep. Storage  (Above)
29525>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
29526>            THAN THE STORAGE COEFFICIENT.
29527>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
29528>
29529> ------------------------------------------------------------------------------
29530>
29531> --------------------
29532> | ADD HYD  (******)|
29533> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
29534> --------------------          (ha)    (cms)    (hrs)     (mm)
29535>         ID1= 1 (******):     0.93   0.023     1.08     5.36
29536>       + ID2= 2 (******):     3.93   0.448     1.00    20.74
29537>         ================================================
29538>         ID = 3 (******):     4.86   0.469     1.00    17.80
29539>
29540>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
29541> ------------------------------------------------------------------------------
29542>
29543> --------------------
29544> | ADD HYD  (******)|
29545> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
29546> --------------------          (ha)    (cms)    (hrs)     (mm)
29547>         ID1= 3 (******):     4.86   0.469     1.00    17.80
29548>       + ID2= 2 (******):     0.45   0.052     1.00    20.74
29549>         ================================================
29550>         ID = 1 (******):     5.31   0.520     1.00    18.05
29551>
29552>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
29553> ------------------------------------------------------------------------------
29554>
29555> --------------------
29556> | ADD HYD  (******)|
29557> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
29558> --------------------          (ha)    (cms)    (hrs)     (mm)
29559>         ID1= 1 (******):     5.31   0.520     1.00    18.05
29560>       + ID2= 2 (******):    26.50   0.047     1.75    11.47
29561>         ================================================
29562>         ID = 3 (******):    31.81   0.547     1.00    12.57
29563>
29564>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
29565> ------------------------------------------------------------------------------
29566> --------------------
29567> | CALIB            |
29568> | NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
29569> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
29570> --------------------   U.H. Tp(hrs)=   0.45
29571>
29572>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
29573>
29574>
29575>                                ---- TRANSFORMED HYETOGRAPH ----
29576>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
29577>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
29578>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
29579>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
29580>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
29581>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
29582>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
29583>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
29584>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
29585>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
29586>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
29587>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
29588>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
29589>
29590>      Unit Hyd Qpeak  (cms)=   1.241
29591>
29592>      PEAK FLOW       (cms)=   0.214 (i)
29593>      TIME TO PEAK    (hrs)=   1.333
29594>      RUNOFF VOLUME    (mm)=   5.364
29595>      TOTAL RAINFALL   (mm)=  22.900
29596>      RUNOFF COEFFICIENT   =   0.234
29597>
29598>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
29599>
29600> ------------------------------------------------------------------------------
29601>
29602> --------------------
29603> | ADD HYD  (******)|
29604> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
29605> --------------------          (ha)    (cms)    (hrs)     (mm)
29606>         ID1= 1 (******):    14.62   0.214     1.33     5.36
29607>       + ID2= 2 (******):    31.81   0.547     1.00    12.57
29608>         ================================================
29609>         ID = 3 (******):    46.43   0.655     1.00    10.30
29610>
29611>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
29612> ------------------------------------------------------------------------------
29613> --------------------
29614> | ROUTE CHN(******)|
29615> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
29616> --------------------
29617>                 <------ DATA FOR SECTION (   1.1) ------>
29618>                 Distance      Elevation       Manning
29619>                    0.00         443.75        0.0450
29620>                    8.50         443.74        0.0450
29621>                   35.47         443.64        0.0450
29622>                   64.60         443.29        0.0450
29623>                   74.71         443.18        0.0450
29624>                   80.25         443.17        0.0450
29625>                  112.17         443.12    0.0450 /0.0350  Main Channel
29626>                  131.57         442.76        0.0350      Main Channel
29627>                  137.50         442.66        0.0350      Main Channel
29628>                  137.91         442.67        0.0350      Main Channel
29629>                  152.28         442.24        0.0350      Main Channel
29630>                  167.40         441.39        0.0350      Main Channel
29631>                  178.29         441.56        0.0350      Main Channel
29632>                  216.75         442.01        0.0350      Main Channel
29633>                  221.54         442.05    0.0350 /0.0450  Main Channel
29634>                  334.66         442.50        0.0450
29635>
29636>       <--------------------- TRAVEL TIME TABLE ---------------------->
29637>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
29638>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
29639>         0.05   441.45    .114E+03       0.0         0.27       55.89
29640>         0.11   441.50    .457E+03       0.2         0.43       35.21
29641>         0.16   441.56    .103E+04       0.6         0.57       26.87
29642>         0.22   441.61    .185E+04       1.4         0.67       22.84
29643>         0.27   441.67    .297E+04       2.5         0.77       19.84
29644>         0.33   441.72    .437E+04       4.1         0.87       17.59
29645>         0.38   441.78    .605E+04       6.4         0.96       15.85
29646>         0.44   441.83    .802E+04       9.2         1.05       14.47
29647>         0.49   441.89    .103E+05      12.8         1.14       13.35
29648>         0.55   441.94    .128E+05      17.2         1.23       12.42
29649>         0.60   442.00    .157E+05      22.4         1.31       11.63
29650>         0.66   442.05    .188E+05      28.3         1.38       11.07
29651>         0.71   442.11    .225E+05      36.9         1.50       10.16
29652>         0.78   442.17    .277E+05      48.4         1.60        9.54
29653>         0.84   442.24    .339E+05      61.9         1.67        9.13
29654>         0.91   442.30    .412E+05      77.1         1.71        8.90
29655>         0.97   442.36    .495E+05      94.7         1.75        8.71
29656>         1.03   442.43    .589E+05     114.9         1.79        8.54
29657>         1.10   442.49    .693E+05     137.9         1.82        8.38
29658>
29659>                                      <---- hydrograph ---->   <-pipe / channel->
29660>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
29661>                                 (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
29662>    INFLOW : ID= 2 (******)    46.43     0.66     1.00  10.30      0.17       0.57
29663>    OUTFLOW: ID= 1 (******)    46.43     0.33     1.08  10.30      0.12       0.46
29664>
29665>
29666>
29667> ------------------------------------------------------------------------------
29668> --------------------
29669> | DIVERTHYD(******)|
29670> | IN= 1   # OUT= 5 |
29671> --------------------
29672>      Outflow / Inflow  Relationships
29673>
29674>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
29675>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
29676>         0.00     0.00     0.00     0.00     0.00     0.00
29677>         0.92     0.00     0.00     0.00     0.00     0.92
29678>         1.00     0.73     0.00     0.00     0.00     1.73
29679>         1.00     1.11     0.00     0.00     0.00     2.11
29680>         1.00     1.60     0.00     0.00     0.00     2.60
29681>         1.00     2.08     0.00     0.00     0.00     3.08
29682>         1.00     2.63     0.00     0.00     0.00     3.63
```

```
      1.00     4.53     0.00     0.00     0.00     5.53

                            AREA     QPEAK     TPEAK     R.V.
                             (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):  46.43      0.33      1.08    10.30
     ==================================================
     ID= 2  (   2)    :  46.43      0.33      1.08    10.30
     ID= 3  (   2)    :   0.00      0.00      0.00     0.00
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083     0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167     0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250     0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333     0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417     0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500     0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583    41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667    41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750    41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833    41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917    41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.007 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.340
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.233

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):     0.22   0.007     1.00     5.34
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 3 (******):     0.22   0.007     1.00     5.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         433.07        0.0450
                 59.66         432.39        0.0450
                 94.25         432.03        0.0450
                115.71         431.82        0.0450
                143.84         431.84    0.0450 /0.0350  Main Channel
                163.59         431.75        0.0350      Main Channel
                177.84         431.73        0.0350      Main Channel
                199.51         431.70        0.0350      Main Channel
                231.74         431.53        0.0350      Main Channel
                283.71         431.44        0.0350      Main Channel
                294.09         431.43        0.0350      Main Channel
                325.65         431.42        0.0350      Main Channel
                355.24         431.24        0.0350      Main Channel
                383.70         431.43        0.0350      Main Channel
                476.17         432.06    0.0350 /0.0450  Main Channel
                510.88         432.23        0.0450
                558.61         432.37        0.0450
                589.84         432.57        0.0450
                622.97         432.73        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.08   431.32    .108E+03       0.3         0.30       6.68
       0.15   431.39    .434E+03       1.7         0.47       4.21
       0.23   431.47    .119E+04       5.0         0.50       3.99
       0.30   431.54    .252E+04      13.9         0.66       3.02
       0.38   431.62    .417E+04      29.3         0.84       2.37
       0.45   431.69    .604E+04      50.1         0.99       2.01
       0.53   431.77    .828E+04      73.9         1.06       1.87
       0.60   431.84    .109E+05     108.8         1.19       1.67
       0.68   431.92    .142E+05     159.5         1.34       1.48
       0.76   432.01    .176E+05     219.4         1.48       1.34
       0.84   432.09    .213E+05     290.0         1.62       1.22
       0.92   432.17    .252E+05     374.6         1.77       1.12
       1.01   432.25    .293E+05     469.2         1.91       1.04
       1.09   432.33    .338E+05     573.9         2.02       0.98
       1.17   432.41    .386E+05     689.9         2.13       0.93
       1.25   432.49    .435E+05     817.2         2.24       0.89
       1.33   432.57    .487E+05     955.3         2.34       0.85
       1.41   432.65    .541E+05    1103.5         2.43       0.82
       1.49   432.73    .597E+05    1262.7         2.52       0.79

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)    0.22     0.01     1.00   5.34      0.00      0.30
   OUTFLOW: ID= 1 (******)    0.22     0.01     1.17   5.33      0.00      0.30


--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.073     1.17     5.36
      + ID2= 2 (******):     0.45   0.014     1.00     5.34
        ==================================================
        ID = 3 (******):     4.32   0.083     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.083     1.17     5.36
      + ID2= 2 (******):     0.22   0.006     1.17     5.33
        ==================================================
        ID = 1 (******):     4.54   0.089     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         430.79        0.0450
                 23.82         429.79    0.0450 /0.0350  Main Channel
                 44.05         429.11        0.0350      Main Channel
                 70.46         428.15        0.0350      Main Channel
                112.31         427.60        0.0350      Main Channel
                150.77         427.27        0.0350      Main Channel
                179.17         427.15        0.0350      Main Channel
                214.90         427.16        0.0350      Main Channel
                261.89         427.25        0.0350      Main Channel
                317.65         427.56        0.0350      Main Channel
                382.75         427.99        0.0350      Main Channel
                394.40         428.11        0.0350      Main Channel
                432.80         428.07        0.0350      Main Channel
                432.91         428.07        0.0350      Main Channel
                462.57         428.15        0.0350      Main Channel
                522.90         429.79    0.0350 /0.0450  Main Channel
                585.04         429.90        0.0450
                731.92         430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.18   427.33    .207E+04      11.5         0.73       2.99
       0.35   427.50    .570E+04      49.9         1.15       1.91
       0.53   427.68    .105E+05     119.2         1.49       1.47
       0.70   427.85    .163E+05     221.8         1.79       1.22
       0.88   428.03    .229E+05     360.8         2.06       1.06
       1.06   428.21    .312E+05     509.7         2.14       1.02
       1.23   428.38    .405E+05     771.0         2.49       0.88
       1.41   428.56    .500E+05    1076.3         2.82       0.77
       1.58   428.73    .598E+05    1423.8         3.12       0.70
       1.76   428.91    .699E+05    1812.5         3.40       0.64
       1.94   429.09    .802E+05    2241.5         3.66       0.60
       2.11   429.26    .907E+05    2709.1         3.91       0.56
       2.29   429.44    .102E+06    3215.8         4.15       0.53
       2.46   429.61    .113E+06    3761.6         4.38       0.50
       2.64   429.79    .124E+06    4346.4         4.59       0.48
       2.85   430.00    .139E+06    5173.9         4.88       0.45
       3.06   430.20    .156E+06    6075.9         5.12       0.43
       3.26   430.41    .173E+06    7054.9         5.33       0.41
       3.47   430.62    .193E+06    8114.3         5.52       0.40

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)    4.54     0.09     1.17   5.36      0.00      0.73
   OUTFLOW: ID= 1 (******)    4.54     0.09     1.17   5.36      0.00      0.73


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083     0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167     0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250     0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333     0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417     0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500     0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583    41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667    41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750    41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833    41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917    41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.024 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.358
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083     0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167     0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250     0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333     0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417     0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500     0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583    41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667    41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750    41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833    41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917    41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.020 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.349
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.020     1.08     5.35
      + ID2= 2 (******):     0.97   0.024     1.08     5.36
        ==================================================
        ID = 3 (******):     1.66   0.044     1.08     5.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.044     1.08     5.35
      + ID2= 2 (******):     4.54   0.086     1.17     5.36
        ==================================================
        ID = 3 (******):     6.20   0.125     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00
```

```
                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   6.20      0.12      1.17    5.36
      ================================================
      ID= 2  (   2)    :   6.20      0.12      1.17    5.36
      ID= 3  (   2)    :   0.00      0.00      1.17    5.36
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.96         0.25
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.64         0.54
      Length            (m)=      63.89       157.20
      Mannings n           =      0.013        0.030

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60        14.66
                over (min)        5.00        20.00
      Storage Coeff.  (min)=      3.17 (ii)   17.52 (ii)
      Unit Hyd. Tpeak (min)=      5.00        20.00
      Unit Hyd. peak  (cms)=      0.27         0.06
                                                      *TOTALS*
      PEAK FLOW       (cms)=      0.11         0.01       0.114 (iii)
      TIME TO PEAK    (hrs)=      1.00         1.17        1.00
      RUNOFF VOLUME    (mm)=     20.90         5.36       17.63
      TOTAL RAINFALL   (mm)=     22.90        22.90       22.90
      RUNOFF COEFFICIENT   =      0.91         0.23        0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.32         0.58
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.70         0.60
      Length            (m)=     166.18       124.91
      Mannings n           =      0.013        0.030

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60        16.38
                over (min)        5.00        15.00
      Storage Coeff.  (min)=      5.48 (ii)   10.06 (ii)
      Unit Hyd. Tpeak (min)=      5.00        15.00
      Unit Hyd. peak  (cms)=      0.20         0.10
                                                      *TOTALS*
      PEAK FLOW       (cms)=      0.27         0.02       0.280 (iii)
      TIME TO PEAK    (hrs)=      1.00         1.08        1.00
      RUNOFF VOLUME    (mm)=     20.90         5.36       17.79
      TOTAL RAINFALL   (mm)=     22.90        22.90       22.90
      RUNOFF COEFFICIENT   =      0.91         0.23        0.78

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.90    0.280     1.00    17.79
      + ID2= 2 (******):     1.21    0.114     1.00    17.63
        ================================================
        ID = 3 (  0043):     4.11    0.394     1.00    17.74

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         0.85     0.00     0.00     0.00     0.00     0.85
         0.85     1.00     0.00     0.00     0.00     1.85
         0.85   100.00     0.00     0.00     0.00   100.85

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   4.11      0.39      1.00   17.74
      ================================================
      ID= 2  (   2)    :   4.11      0.39      1.00   17.74
      ID= 3  (   2)    :   0.00      0.00      1.00   17.74
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00    0.000     1.17     5.36
      + ID2= 2 (******):     4.11    0.394     1.00    17.74
        ================================================
        ID = 3 (******):     4.11    0.394     1.00    17.74

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         0.00     5.20     0.00     0.00     0.00     5.20
         1.00     5.20     0.00     0.00     0.00     6.20
       100.00     5.20     0.00     0.00     0.00   105.20

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   4.11      0.39      1.00   17.74
      ================================================
      ID= 2  (   2)    :   0.00      0.00      1.00   17.74
      ID= 3  (   2)    :   4.11      0.39      1.00   17.74
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.20    0.125     1.17     5.36
      + ID2= 2 (******):     0.00    0.000     1.00    17.74
        ================================================
        ID = 3 (******):     6.20    0.125     1.17     5.36

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         1.00     0.00     0.00     0.00     0.00     1.00
       100.00     0.00     0.00     0.00     0.00   100.00

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   6.20      0.12      1.17    5.36
      ================================================
      ID= 2  (   2)    :   6.20      0.12      1.17    5.36
      ID= 3  (   2)    :   0.00      0.00      1.17    5.36
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         0.00     0.00     0.00     0.00     0.00     0.00
         0.01     0.00     0.00     0.00     0.00     0.01
         0.06     0.00     0.00     0.00     0.00     0.06
         0.08     0.00     0.00     0.00     0.00     0.08
         0.12     0.00     0.00     0.00     0.00     0.12
         0.20     0.00     0.00     0.00     0.00     0.20
         0.25     0.00     0.00     0.00     0.00     0.25
         0.30     0.00     0.00     0.00     0.00     0.30
         0.33     0.00     0.00     0.00     0.00     0.33
         0.37     0.00     0.00     0.00     0.00     0.37
         0.39     0.00     0.00     0.00     0.00     0.39
         0.42     1.43     0.00     0.00     0.00     1.85
         0.44     8.83     0.00     0.00     0.00     9.27
         0.47    25.03     0.00     0.00     0.00    25.50
         0.49    52.11     0.00     0.00     0.00    52.61
         0.52    91.81     0.00     0.00     0.00    92.33
         0.53   126.04     0.00     0.00     0.00   126.57

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):   6.20      0.12      1.17    5.36
      ================================================
      ID= 2  (   2)    :   6.19      0.12      1.17    5.36
      ID= 3  (   2)    :   0.01      0.00      1.17    5.36
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.81         0.01
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.50         1.00
      Length            (m)=      18.40         0.00
      Mannings n           =      0.013        0.030

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60        16.38
                over (min)        5.00         5.00
      Storage Coeff.  (min)=      1.62 (ii)    1.62 (ii)
      Unit Hyd. Tpeak (min)=      5.00         5.00
      Unit Hyd. peak  (cms)=      0.32         0.32
                                                      *TOTALS*
      PEAK FLOW       (cms)=      0.09         0.00       0.094 (iii)
      TIME TO PEAK    (hrs)=      1.00         1.00        1.00
      RUNOFF VOLUME    (mm)=     20.90         5.36       20.74
      TOTAL RAINFALL   (mm)=     22.90        22.90       22.90
      RUNOFF COEFFICIENT   =      0.91         0.23        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
```

```
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.82    0.094     1.00     20.74
      + ID2= 2 (******):     0.00    0.000     1.17      5.36
        ================================================
        ID = 3 (******):     0.82    0.094     1.00     20.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     0.82    0.094     1.00     20.74
      + ID2= 2 (******):     0.01    0.000     1.17      5.36
        ================================================
        ID = 1 (******):     0.83    0.094     1.00     20.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.00     0.00     0.00     0.00     0.00     0.00
       0.03     0.00     0.00     0.00     0.00     0.03
       0.04     0.00     0.00     0.00     0.00     0.04
       0.09     0.00     0.00     0.00     0.00     0.09
       0.12     0.00     0.00     0.00     0.00     0.13
       0.20     0.00     0.00     0.00     0.00     0.20
       0.30     0.00     0.00     0.00     0.00     0.30
       0.37     0.00     0.00     0.00     0.00     0.37
       0.43     0.00     0.00     0.00     0.00     0.43
       0.48     0.00     0.00     0.00     0.00     0.48
       0.52     0.00     0.00     0.00     0.00     0.52
       0.57     0.00     0.00     0.00     0.00     0.57
       0.67     0.00     0.00     0.00     0.00     0.67
       0.68     0.00     0.00     0.00     0.00     0.68
       0.68     0.02     0.00     0.00     0.00     0.70
       0.72     0.56     0.00     0.00     0.00     1.28
       0.73     0.75     0.01     0.00     0.00     1.48
       1.10     1.87     0.54     0.00     0.00     3.51
       1.40     2.25     2.61     0.00     0.00     6.26

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   0.83      0.09      1.00   20.64
     ================================================
     ID= 2  (   3)    :   0.82      0.09      1.00   20.64
     ID= 3  (   3)    :   0.00      0.00      1.00   20.64
     ID= 4  (   3)    :   0.00      0.00      1.00   20.64
     ID= 5  (   3)    :   0.00      0.00      0.00    0.00
     ID= 6  (   3)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     6.19    0.125     1.17      5.36
      + ID2= 2 (******):     0.82    0.094     1.00     20.64
        ================================================
        ID = 3 (******):     7.02    0.187     1.00      7.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  11.36   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   1.315

     PEAK FLOW       (cms)=   0.215 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.363
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.020 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.357
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area     (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------

                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     54.14         24.23
     Dep. Storage     (mm)=      2.00          5.78
     Average Slope     (%)=      1.20          1.20
     Length            (m)=    722.82         47.00
     Mannings n           =     0.015         0.260
```

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         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         17.74
                   over (min)      10.00         35.00
     Storage Coeff.  (min)=      12.26 (ii)    30.79 (ii)
     Unit Hyd. Tpeak (min)=      10.00         35.00
     Unit Hyd. peak  (cms)=       0.10          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.36          0.47          4.527 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.42           1.00
     RUNOFF VOLUME    (mm)=      20.90          5.33          14.09
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.23           0.62

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         144.07        0.0450
                  9.00         143.84        0.0450
                 12.00         142.90        0.0450
                 15.00         142.48        0.0450
                 18.00         142.43    0.0450 /0.0350  Main Channel
                 21.00         142.31        0.0350      Main Channel
                 24.00         142.12        0.0350      Main Channel
                 27.00         142.44    0.0350 /0.0450  Main Channel
                 30.00         142.71        0.0450
                 33.00         143.18        0.0450
                 36.00         143.27        0.0450
                 37.00         143.36        0.0450
                 38.00         143.64        0.0450
                 39.00         143.92        0.0450
                 40.00         143.93        0.0450
                 45.00         144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.08   142.20    .282E+02       0.0         0.24       26.26
       0.16   142.27    .113E+03       0.1         0.38       16.54
       0.23   142.35    .257E+03       0.3         0.48       13.09
       0.31   142.43    .477E+03       0.7         0.57       11.02
       0.42   142.54    .969E+03       2.0         0.76        8.24
       0.53   142.65    .157E+04       3.8         0.92        6.80
       0.64   142.76    .224E+04       6.3         1.06        5.90
       0.75   142.87    .299E+04       9.5         1.19        5.26
       0.86   142.98    .379E+04      13.2         1.31        4.77
       0.97   143.09    .463E+04      17.6         1.43        4.37
       1.08   143.20    .552E+04      22.5         1.53        4.09
       1.19   143.31    .653E+04      27.9         1.60        3.90
       1.30   143.42    .761E+04      34.4         1.70        3.69
       1.41   143.53    .874E+04      41.7         1.79        3.49
       1.52   143.64    .989E+04      49.7         1.89        3.32
       1.63   143.75    .111E+05      58.3         1.98        3.17
       1.74   143.85    .123E+05      66.9         2.04        3.06
       1.85   143.96    .137E+05      73.2         2.01        3.11
       1.96   144.07    .153E+05      81.5         2.00        3.13

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 40600)   78.37     4.53     1.00  14.09      0.56       0.95
   OUTFLOW: ID= 1 ( 60600)   78.37     4.22     1.08  14.09      0.55       0.94


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area     (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------

                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.75          2.18
     Dep. Storage     (mm)=      2.00          8.00
     Average Slope     (%)=      2.90          2.90
     Length            (m)=    162.03         40.00
     Mannings n           =     0.015         0.340

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          9.91
                   over (min)       5.00         25.00
     Storage Coeff.  (min)=       3.84 (ii)    22.98 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.25          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.14          0.03          0.157 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.25           1.00
     RUNOFF VOLUME    (mm)=      20.90          3.43           8.95
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.15           0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40610):     3.94    0.157     1.00      8.95
      + ID2= 2 ( 60600):    78.37    4.215     1.08     14.09
        ================================================
```

```
         ID = 3 ( 50600):    82.31   4.281     1.08    13.84

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        143.40        0.0450
                    2.00        142.92        0.0450
                    4.00        142.14        0.0450
                    6.00        141.49        0.0450
                    8.00        141.11        0.0450
                   10.00        141.00    0.0450 /0.0350  Main Channel
                   12.00        140.98        0.0350      Main Channel
                   14.00        140.82        0.0350      Main Channel
                   16.00        141.02    0.0350 /0.0450  Main Channel
                   18.00        141.19        0.0450
                   20.00        141.19        0.0450
                   22.00        141.44        0.0450
                   24.00        142.00        0.0450
                   26.00        142.20        0.0450
                   28.00        142.39        0.0450
                   30.00        142.96        0.0450
                   31.00        143.13        0.0450
                   32.00        143.28        0.0450
                   33.00        143.41        0.0450
                   34.00        143.44        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   140.91    .314E+02       0.0         0.24       23.12
        0.18   141.00    .132E+03       0.1         0.31       17.83
        0.33   141.14    .502E+03       0.9         0.58        9.54
        0.47   141.29    .107E+04       2.4         0.74        7.47
        0.61   141.43    .175E+04       4.7         0.89        6.20
        0.75   141.57    .251E+04       7.9         1.05        5.31
        0.89   141.71    .332E+04      11.8         1.19        4.68
        1.03   141.85    .416E+04      16.5         1.32        4.21
        1.17   141.99    .506E+04      21.8         1.44        3.86
        1.31   142.13    .601E+04      27.5         1.52        3.64
        1.45   142.27    .705E+04      34.0         1.61        3.46
        1.59   142.41    .818E+04      41.5         1.69        3.29
        1.73   142.55    .936E+04      50.2         1.79        3.11
        1.88   142.69    .106E+05      59.8         1.88        2.95
        2.02   142.84    .118E+05      70.2         1.97        2.81
        2.16   142.98    .132E+05      81.2         2.06        2.70
        2.30   143.12    .145E+05      92.6         2.12        2.61
        2.44   143.26    .159E+05     104.8         2.19        2.54
        2.58   143.40    .174E+05     117.7         2.24        2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50600)   82.31     4.28    1.08  13.84      0.58      0.86
   OUTFLOW: ID= 1 ( 60610)   82.31     3.95    1.17  13.84      0.56      0.84


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40620)|   Area     (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30          1.37
     Dep. Storage     (mm)=       2.00          5.59
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     194.41         43.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     0.00 | 1.000    41.60 | 1.917     0.00 |  2.83     1.00
               0.167     0.00 | 1.083     2.60 | 2.000     0.00 |  2.92     1.00
               0.250     0.00 | 1.167     2.60 | 2.083     0.60 |  3.00     1.00
               0.333     0.00 | 1.250     2.60 | 2.167     0.60 |  3.08     0.00
               0.417     0.00 | 1.333     2.60 | 2.250     0.60 |  3.17     0.00
               0.500     0.00 | 1.417     2.60 | 2.333     0.60 |  3.25     0.00
               0.583    41.60 | 1.500     2.60 | 2.417     0.60 |  3.33     0.00
               0.667    41.60 | 1.583     0.00 | 2.500     0.60 |  3.42     0.00
               0.750    41.60 | 1.667     0.00 | 2.583     1.00 |  3.50     0.00
               0.833    41.60 | 1.750     0.00 | 2.667     1.00 |
               0.917    41.60 | 1.833     0.00 | 2.750     1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         26.85
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       5.22 (ii)    19.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.21          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.39          0.05          0.431 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.17          1.00
     RUNOFF VOLUME    (mm)=      20.90          6.21         15.12
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.27          0.66

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40620):     5.67    0.431     1.00    15.12
     + ID2= 2 ( 60610):    82.31    3.948     1.17    13.84
       ====================================================
       ID = 3 ( 50610):    87.98    4.079     1.17    13.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        142.03        0.0450
                    1.00        141.71        0.0450
                    2.00        141.35        0.0450
                    3.00        141.01        0.0450
                    4.00        140.79        0.0450
                    5.00        140.56        0.0450
                    6.00        140.44        0.0450
                    7.00        140.30    0.0450 /0.0350  Main Channel
                    8.00        140.08        0.0350      Main Channel
                    9.00        139.88        0.0350      Main Channel
                   10.00        139.97        0.0350      Main Channel
                   11.00        140.12        0.0350      Main Channel
                   12.00        140.35    0.0350 /0.0450  Main Channel
                   13.00        140.52        0.0450
                   14.00        140.73        0.0450
                   15.00        140.97        0.0450
                   16.00        141.27        0.0450
                   17.00        141.57        0.0450
                   18.00        141.89        0.0450
                   19.00        142.07        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02       0.0         0.36        8.21
        0.21   140.09    .579E+02       0.2         0.59        5.04
        0.31   140.19    .120E+03       0.5         0.78        3.79
        0.42   140.30    .200E+03       1.1         0.95        3.12
        0.53   140.41    .313E+03       2.1         1.18        2.51
        0.65   140.53    .456E+03       3.5         1.36        2.18
        0.76   140.65    .630E+03       5.3         1.50        1.98
        0.88   140.76    .826E+03       7.6         1.63        1.82
        0.99   140.88    .104E+04      10.3         1.75        1.69
        1.11   140.99    .128E+04      13.4         1.87        1.59
        1.23   141.11    .154E+04      17.1         1.98        1.50
        1.34   141.22    .180E+04      21.2         2.09        1.42
        1.46   141.34    .209E+04      25.8         2.20        1.35
        1.57   141.45    .239E+04      30.9         2.30        1.29
        1.69   141.57    .270E+04      36.4         2.40        1.24
        1.80   141.69    .303E+04      42.4         2.49        1.19
        1.92   141.80    .337E+04      48.9         2.58        1.15
        2.04   141.92    .373E+04      55.9         2.67        1.11
        2.15   142.03    .411E+04      63.2         2.74        1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98     4.08    1.17  13.92      0.68      1.40
   OUTFLOW: ID= 1 ( 60620)   87.98     4.11    1.17  13.92      0.69      1.41


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area     (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91          1.23
     Dep. Storage     (mm)=       2.00          7.60
     Average Slope     (%)=       1.70          1.70
     Length            (m)=     119.23         45.00
     Mannings n           =      0.015         0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     0.00 | 1.000    41.60 | 1.917     0.00 |  2.83     1.00
               0.167     0.00 | 1.083     2.60 | 2.000     0.00 |  2.92     1.00
               0.250     0.00 | 1.167     2.60 | 2.083     0.60 |  3.00     1.00
               0.333     0.00 | 1.250     2.60 | 2.167     0.60 |  3.08     0.00
               0.417     0.00 | 1.333     2.60 | 2.250     0.60 |  3.17     0.00
               0.500     0.00 | 1.417     2.60 | 2.333     0.60 |  3.25     0.00
               0.583    41.60 | 1.500     2.60 | 2.417     0.60 |  3.33     0.00
               0.667    41.60 | 1.583     0.00 | 2.500     0.60 |  3.42     0.00
               0.750    41.60 | 1.667     0.00 | 2.583     1.00 |  3.50     0.00
               0.833    41.60 | 1.750     0.00 | 2.667     1.00 |
               0.917    41.60 | 1.833     0.00 | 2.750     1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          7.01
                   over (min)       5.00         35.00
     Storage Coeff.  (min)=       3.75 (ii)    30.94 (ii)
     Unit Hyd. Tpeak (min)=       5.00         35.00
     Unit Hyd. peak  (cms)=       0.25          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.08          0.01          0.082 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.42          1.00
     RUNOFF VOLUME    (mm)=      20.90          3.57          9.04
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.16          0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40640):     2.13    0.082     1.00     9.04
     + ID2= 2 ( 60620):    87.98    4.105     1.17    13.92
       ====================================================
       ID = 3 ( 50630):    90.11    4.123     1.17    13.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area     (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13          7.40
     Dep. Storage     (mm)=       2.00          5.95
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     370.01         42.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     0.00 | 1.000    41.60 | 1.917     0.00 |  2.83     1.00
               0.167     0.00 | 1.083     2.60 | 2.000     0.00 |  2.92     1.00
               0.250     0.00 | 1.167     2.60 | 2.083     0.60 |  3.00     1.00
               0.333     0.00 | 1.250     2.60 | 2.167     0.60 |  3.08     0.00
               0.417     0.00 | 1.333     2.60 | 2.250     0.60 |  3.17     0.00
               0.500     0.00 | 1.417     2.60 | 2.333     0.60 |  3.25     0.00
               0.583    41.60 | 1.500     2.60 | 2.417     0.60 |  3.33     0.00
               0.667    41.60 | 1.583     0.00 | 2.500     0.60 |  3.42     0.00
               0.750    41.60 | 1.667     0.00 | 2.583     1.00 |  3.50     0.00
               0.833    41.60 | 1.750     0.00 | 2.667     1.00 |
               0.917    41.60 | 1.833     0.00 | 2.750     1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         15.31
                   over (min)      10.00         30.00
     Storage Coeff.  (min)=       7.84 (ii)    25.78 (ii)
     Unit Hyd. Tpeak (min)=      10.00         30.00
     Unit Hyd. peak  (cms)=       0.13          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.19          0.14          1.245 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.33          1.00
     RUNOFF VOLUME    (mm)=      20.90          4.94         13.34
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.22          0.58

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40630):    20.54    1.245     1.00    13.34
     + ID2= 2 ( 50630):    90.11    4.123     1.17    13.81
       ====================================================
       ID = 3 ( 50640):   110.65    5.080     1.08    13.72
```

```
30907>
30908>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
30909> ------------------------------------------------------------------------------
30910> --------------------
30911> | RESERVOIR(******)|     OVERFLOW IS ON
30912> | IN= 2---> OUT= 1 |
30913> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
30914> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
30915>                            0.0000      0.0000  |    3.4010      4.4390
30916>                            0.0530      0.4910  |    4.8380      5.5060
30917>                            0.0890      0.7040  |    5.8470      5.5380
30918>                            0.2040      1.0890  |    6.5980      5.9190
30919>                            0.3240      1.4800  |    7.2560      6.2250
30920>                            0.3890      1.7490  |    7.9030      6.4820
30921>                            0.4470      1.9970  |    8.4910      6.6820
30922>                            0.5090      2.3490  |   12.0680      7.1150
30923>                            0.7420      2.9150  |   20.0000      7.2000
30924>                            1.7580      3.6690  |    0.0000      0.0000
30925>
30926>                                 AREA     QPEAK     TPEAK       R.V.
30927>                                  (ha)     (cms)     (hrs)       (mm)
30928>    INFLOW : ID= 2 ( 50640)    110.646      5.080      1.08      13.72
30929>    OUTFLOW: ID= 1 (******)    110.646      0.265      3.00      13.70
30930>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
30931>
30932>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
30933>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
30934>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
30935>
30936>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.22
30937>                    TIME SHIFT OF PEAK FLOW          (min)=115.00
30938>                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.2887
30939>
30940> ------------------------------------------------------------------------------
30941>
30942>    --------------------------
30943>    | Junction Command(30651003) |
30944>    --------------------------
30945>
30946>                              AREA     QPEAK   TPEAK     R.V.
30947>                              (ha)     (cms)    (hrs)     (mm)
30948>    INFLOW : ID= 3(30651001)    0.00     0.00    0.00     0.00
30949>    OUTFLOW: ID= 2(30651003)    0.00     0.00    0.00     0.00
30950>
30951>    ------------------------------------------------------------------------------
30952>
30953> --------------------
30954> | ADD HYD  (******)|
30955> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
30956> --------------------           (ha)     (cms)    (hrs)     (mm)
30957> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
30958> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
30959>         ID1= 1 (******):   110.65   0.265     3.00    13.70
30960>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
30961>         ========================================================
30962>         ID = 3 (******):   110.65   0.265     3.00    13.70
30963>
30964>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
30965> ------------------------------------------------------------------------------
30966>
30967> --------------------
30968> | ADD HYD  (******)|
30969> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
30970> --------------------           (ha)     (cms)    (hrs)     (mm)
30971>         ID1= 3 (******):   110.65   0.265     3.00    13.70
30972>       + ID2= 2 (******):     0.75   0.020     1.08     5.36
30973>         ========================================================
30974>         ID = 1 (******):   111.40   0.266     3.00    13.64
30975>
30976>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
30977> ------------------------------------------------------------------------------
30978>
30979> --------------------
30980> | ADD HYD  (******)|
30981> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
30982> --------------------           (ha)     (cms)    (hrs)     (mm)
30983>         ID1= 1 (******):    11.36   0.215     1.17     5.36
30984>       + ID2= 2 (******):   111.40   0.266     3.00    13.64
30985>         ========================================================
30986>         ID = 3 (******):   122.76   0.331     1.42    12.88
30987>
30988>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
30989> ------------------------------------------------------------------------------
30990> --------------------
30991> | ROUTE CHN(******)|
30992> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
30993> --------------------
30994>                <------ DATA FOR SECTION (   1.1) ------>
30995>                Distance      Elevation       Manning
30996>                    0.00         447.10        0.0450
30997>                   42.83         446.80        0.0450
30998>                   42.89         446.80        0.0450
30999>                   43.24         446.79        0.0450
31000>                  122.57         446.48        0.0450
31001>                  154.02         446.22        0.0450
31002>                  191.79         446.32    0.0450 /0.0350  Main Channel
31003>                  199.05         442.27        0.0350      Main Channel
31004>                  199.74         442.33        0.0350      Main Channel
31005>                  212.02         444.19        0.0350      Main Channel
31006>                  232.17         444.54    0.0350 /0.0450  Main Channel
31007>                  348.58         444.42        0.0450
31008>                  359.23         444.30        0.0450
31009>                  381.33         444.03        0.0450
31010>                  483.65         444.18        0.0450
31011>                  548.64         445.87        0.0450
31012>
31013>       <--------------------- TRAVEL TIME TABLE ---------------------->
31014>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
31015>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
31016>         0.19   442.46    .184E+03        0.1         0.65      24.29
31017>         0.38   442.65    .662E+03        0.7         1.01      15.64
31018>         0.57   442.84    .143E+04        2.0         1.31      12.09
31019>         0.76   443.03    .247E+04        4.1         1.57      10.05
31020>         0.95   443.22    .381E+04        7.3         1.81       8.70
31021>         1.14   443.41    .543E+04       11.7         2.04       7.73
31022>         1.33   443.60    .733E+04       17.5         2.26       6.99
31023>         1.52   443.79    .952E+04       24.8         2.46       6.41
31024>         1.71   443.98    .120E+05       33.7         2.66       5.93
31025>         1.89   444.16    .211E+05       47.0         2.11       7.49
31026>         2.08   444.35    .469E+05       73.0         1.47      10.71
31027>         2.27   444.54    .855E+05      117.6         1.30      12.12
31028>         2.46   444.73    .140E+06      240.0         1.62       9.75
31029>         2.65   444.92    .197E+06      400.4         1.92       8.20
31030>         2.84   445.11    .255E+06      595.0         2.21       7.13
31031>         3.03   445.30    .314E+06      821.8         2.48       6.37
31032>         3.22   445.49    .374E+06     1079.2         2.73       5.78
31033>         3.41   445.68    .436E+06     1366.3         2.96       5.32
31034>         3.60   445.87    .500E+06     1682.3         3.19       4.95
31035>
31036>                                    <---- hydrograph ---->   <-pipe / channel->
31037>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
31038>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
31039>    INFLOW : ID= 2 (******)  122.76     0.33    1.42  12.88      0.26      0.74
31040>    OUTFLOW: ID= 1 (******)  122.76     0.28    1.92  12.88      0.24      0.72
31041>
31042>
31043>
31044> ------------------------------------------------------------------------------
31045> --------------------
31046> | CALIB            |
31047> | NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
31048> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
31049> --------------------   U.H. Tp(hrs)=   0.19
31050>
31051>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
31052>
31053>
31054>                                ---- TRANSFORMED HYETOGRAPH ----
31055>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
31056>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
31057>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
31058>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
31059>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
31060>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
31061>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
31062>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
31063>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
31064>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
31065>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
31066>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
31067>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
31068>
31069>      Unit Hyd Qpeak  (cms)=   0.090
31070>
31071>      PEAK FLOW       (cms)=   0.013 (i)
31072>      TIME TO PEAK    (hrs)=   1.083
31073>      RUNOFF VOLUME    (mm)=   5.352
31074>      TOTAL RAINFALL   (mm)=  22.900
31075>      RUNOFF COEFFICIENT   =   0.234
31076>
31077>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
31078>
31079> ------------------------------------------------------------------------------
31080>
31081> --------------------
31082> | ADD HYD  (******)|
31083> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
31084> --------------------           (ha)     (cms)    (hrs)     (mm)
31085>         ID1= 1 (******):     0.45   0.013     1.08     5.35
31086>       + ID2= 2 (******):   122.76   0.285     1.92    12.88
31087>         ========================================================
31088>         ID = 3 (******):   123.21   0.285     1.92    12.85
31089>
31090>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
31091> ------------------------------------------------------------------------------
31092> --------------------
31093> | CALIB            |
31094> | NASHYD   (******)|   Area     (ha)=   2.19   Curve Number    (CN)= 85.0
31095> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
31096> --------------------   U.H. Tp(hrs)=   0.27
31097>
31098>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
31099>
31100>
31101>                                ---- TRANSFORMED HYETOGRAPH ----
31102>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
31103>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
31104>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
31105>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
31106>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
31107>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
31108>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
31109>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
31110>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
31111>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
31112>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
31113>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
31114>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
31115>
31116>      Unit Hyd Qpeak  (cms)=   0.310
31117>
31118>      PEAK FLOW       (cms)=   0.048 (i)
31119>      TIME TO PEAK    (hrs)=   1.167
31120>      RUNOFF VOLUME    (mm)=   5.362
31121>      TOTAL RAINFALL   (mm)=  22.900
31122>      RUNOFF COEFFICIENT   =   0.234
31123>
31124>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
31125>
31126> ------------------------------------------------------------------------------
31127> --------------------
31128> | CALIB            |
31129> | NASHYD   (******)|   Area     (ha)=   0.39   Curve Number    (CN)= 85.0
31130> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
31131> --------------------   U.H. Tp(hrs)=   0.18
31132>
31133>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
31134>
31135>
31136>                                ---- TRANSFORMED HYETOGRAPH ----
31137>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
31138>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
31139>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
31140>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
31141>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
31142>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
31143>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
31144>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
31145>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
31146>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
31147>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
31148>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
31149>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
31150>
31151>      Unit Hyd Qpeak  (cms)=   0.083
31152>
31153>      PEAK FLOW       (cms)=   0.011 (i)
31154>      TIME TO PEAK    (hrs)=   1.083
31155>      RUNOFF VOLUME    (mm)=   5.348
31156>      TOTAL RAINFALL   (mm)=  22.900
31157>      RUNOFF COEFFICIENT   =   0.234
31158>
31159>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
31160>
31161> ------------------------------------------------------------------------------
31162>
31163> --------------------
31164> | ADD HYD  (******)|
31165> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
31166> --------------------           (ha)     (cms)    (hrs)     (mm)
31167>         ID1= 1 (******):     0.39   0.011     1.08     5.35
31168>       + ID2= 2 (******):     2.19   0.048     1.17     5.36
31169>         ========================================================
31170>         ID = 3 (******):     2.58   0.059     1.08     5.36
31171>
31172>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
31173> ------------------------------------------------------------------------------
31174>
31175> --------------------
31176> | ADD HYD  (******)|
31177> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
31178> --------------------           (ha)     (cms)    (hrs)     (mm)
31179>         ID1= 3 (******):     2.58   0.059     1.08     5.36
31180>       + ID2= 2 (******):   123.21   0.285     1.92    12.85
31181>         ========================================================
31182>         ID = 1 (******):   125.79   0.293     1.75    12.70
31183>
31184>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
31185> ------------------------------------------------------------------------------
31186> --------------------
31187> | ROUTE CHN(******)|
31188> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
31189> --------------------
31190>                <------ DATA FOR SECTION (   1.1) ------>
31191>                Distance      Elevation       Manning
31192>                    0.00         429.12        0.0450
31193>                   37.54         428.86        0.0450
31194>                   53.31         428.70        0.0450
31195>                   81.17         428.24        0.0450
31196>                   99.28         428.15    0.0450 /0.0350  Main Channel
31197>                  114.53         427.72        0.0350      Main Channel
31198>                  119.88         426.51        0.0350      Main Channel
31199>                  124.17         425.84        0.0350      Main Channel
31200>                  206.01         425.90        0.0350      Main Channel
31201>                  209.64         426.51        0.0350      Main Channel
31202>                  214.21         426.89        0.0350      Main Channel
31203>                  231.49         427.17        0.0350      Main Channel
31204>                  268.61         427.89    0.0350 /0.0450  Main Channel
31205>                  351.58         428.15        0.0450
31206>                  368.27         428.31        0.0450
31207>                  405.75         428.52        0.0450
31208>                  416.79         428.59        0.0450
31209>                  440.06         428.76        0.0450
31210>                  469.88         428.97        0.0450
31211>
31212>       <--------------------- TRAVEL TIME TABLE ---------------------->
```

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	426.00	.218E+04	4.1	0.39	8.87
0.31	426.16	.495E+04	15.8	0.67	5.22
0.47	426.32	.779E+04	33.2	0.89	3.92
0.63	426.47	.107E+05	55.4	1.08	3.22
0.79	426.63	.137E+05	81.8	1.25	2.78
0.94	426.79	.167E+05	112.4	1.40	2.48
1.10	426.95	.199E+05	144.6	1.52	2.29
1.26	427.10	.233E+05	176.4	1.58	2.20
1.42	427.26	.271E+05	214.5	1.65	2.11
1.57	427.42	.312E+05	258.4	1.73	2.01
1.73	427.58	.356E+05	307.7	1.81	1.93
1.89	427.73	.402E+05	362.0	1.88	1.85
2.05	427.89	.452E+05	415.1	1.91	1.82
2.23	428.07	.525E+05	501.3	1.99	1.74
2.41	428.25	.621E+05	609.1	2.05	1.70
2.59	428.43	.733E+05	739.1	2.10	1.65
2.77	428.61	.862E+05	886.8	2.15	1.62
2.95	428.79	.101E+06	1053.9	2.19	1.59
3.13	428.97	.116E+06	1240.2	2.22	1.57

	<---- hydrograph ----> AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (******)	125.79	0.29	1.75	12.70	0.01	0.39
OUTFLOW: ID= 1 (******)	125.79	0.29	2.00	12.70	0.01	0.39

CALIB
NASHYD (******) | ID= 1 DT= 5.0 min
Area (ha)= 2.59 Curve Number (CN)= 85.0
Ia (mm)= 4.48 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.29

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

Unit Hyd Qpeak (cms)= 0.341

PEAK FLOW (cms)= 0.054 (i)
TIME TO PEAK (hrs)= 1.167
RUNOFF VOLUME (mm)= 5.362
TOTAL RAINFALL (mm)= 22.900
RUNOFF COEFFICIENT = 0.234

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(******)
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	443.75	0.0000	
8.50	443.74	0.0450	
35.47	443.64	0.0450	
64.60	443.29	0.0450	
74.71	443.18	0.0450	
80.25	443.17	0.0450	
112.17	443.12	0.0450 /0.0350	Main Channel
131.57	442.76	0.0350	Main Channel
137.50	442.66	0.0350	Main Channel
137.91	442.67	0.0350	Main Channel
152.28	442.24	0.0350	Main Channel
167.40	441.39	0.0350	Main Channel
178.29	441.56	0.0350	Main Channel
216.75	442.01	0.0350	Main Channel
221.54	442.05	0.0350 /0.0450	Main Channel
334.66	442.50	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	441.45	.216E+02	0.0	0.17	16.51
0.11	441.50	.864E+02	0.1	0.28	10.40
0.16	441.56	.194E+03	0.4	0.36	7.94
0.22	441.61	.350E+03	0.9	0.43	6.75
0.27	441.67	.561E+03	1.6	0.49	5.86
0.33	441.72	.825E+03	2.6	0.55	5.20
0.38	441.78	.114E+04	4.1	0.62	4.68
0.44	441.83	.152E+04	5.9	0.67	4.27
0.49	441.89	.194E+04	8.2	0.73	3.94
0.55	441.94	.242E+04	11.0	0.79	3.67
0.60	442.00	.296E+04	14.3	0.84	3.44
0.66	442.05	.355E+04	18.1	0.88	3.27
0.71	442.11	.425E+04	23.6	0.96	3.00
0.78	442.17	.523E+04	31.0	1.02	2.82
0.84	442.24	.641E+04	39.6	1.07	2.70
0.91	442.30	.778E+04	49.3	1.10	2.63
0.97	442.36	.935E+04	60.5	1.12	2.57
1.03	442.43	.111E+05	73.5	1.14	2.52
1.10	442.49	.131E+05	88.2	1.16	2.47

	<---- hydrograph ----> AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (******)	46.43	0.33	1.08	10.30	0.15	0.33
OUTFLOW: ID= 1 (******)	46.43	0.31	1.42	10.30	0.15	0.33

CALIB
NASHYD (******) | ID= 1 DT= 5.0 min
Area (ha)= 4.24 Curve Number (CN)= 85.0
Ia (mm)= 4.48 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.46

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

Unit Hyd Qpeak (cms)= 0.352

PEAK FLOW (cms)= 0.061 (i)
TIME TO PEAK (hrs)= 1.333
RUNOFF VOLUME (mm)= 5.364
TOTAL RAINFALL (mm)= 22.900
RUNOFF COEFFICIENT = 0.234

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (******)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	4.24	0.061	1.33	5.36
+ ID2= 2 (******):	46.43	0.313	1.42	10.30
ID = 3 (******):	50.67	0.373	1.42	9.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	2.59	0.054	1.17	5.36
+ ID2= 2 (******):	50.67	0.373	1.42	9.88
ID = 3 (******):	53.26	0.415	1.33	9.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(******)
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	429.12	0.0500	
37.54	428.86	0.0500	
53.31	428.70	0.0500	
81.17	428.24	0.0500	
99.28	428.15	0.0500 /0.0300	Main Channel
114.53	427.72	0.0300	Main Channel
119.88	426.51	0.0300	Main Channel
124.17	425.84	0.0300	Main Channel
206.01	425.90	0.0300	Main Channel
209.64	426.51	0.0300	Main Channel
214.21	426.89	0.0300	Main Channel
231.49	427.17	0.0300	Main Channel
268.61	427.89	0.0300 /0.0500	Main Channel
351.58	428.15	0.0500	
368.27	428.31	0.0500	
405.75	428.52	0.0500	
416.79	428.59	0.0500	
440.06	428.76	0.0500	
469.88	428.97	0.0500	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	426.00	.187E+04	9.2	0.88	3.40
0.31	426.16	.424E+04	35.4	1.49	2.00
0.47	426.32	.666E+04	74.1	1.98	1.50
0.63	426.47	.914E+04	123.7	2.41	1.23
0.79	426.63	.117E+05	182.8	2.79	1.07
0.94	426.79	.143E+05	251.2	3.13	0.95
1.10	426.95	.170E+05	323.1	3.39	0.88
1.26	427.10	.199E+05	394.0	3.52	0.84
1.42	427.26	.232E+05	479.1	3.69	0.81
1.57	427.42	.267E+05	577.3	3.86	0.77
1.73	427.58	.304E+05	687.4	4.03	0.74
1.89	427.73	.344E+05	808.6	4.20	0.71
2.05	427.89	.387E+05	927.4	4.28	0.70
2.23	428.07	.449E+05	1119.2	4.45	0.67
2.41	428.25	.531E+05	1356.2	4.56	0.65
2.59	428.43	.627E+05	1638.9	4.66	0.64
2.77	428.61	.737E+05	1955.8	4.73	0.63
2.95	428.79	.859E+05	2310.2	4.79	0.62
3.13	428.97	.996E+05	2701.5	4.84	0.61

	<---- hydrograph ----> AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (******)	53.26	0.42	1.33	9.66	0.01	0.88
OUTFLOW: ID= 1 (******)	53.26	0.41	1.42	9.66	0.01	0.88

ADD HYD (******)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	125.79	0.288	2.00	12.70
+ ID2= 2 (******):	53.26	0.412	1.42	9.66
ID = 3 (******):	179.05	0.650	1.58	11.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (******) | ID= 1 DT= 5.0 min
Area (ha)= 8.58
Total Imp(%)= 58.00 Dir. Conn.(%)= 58.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.98	3.60
Dep. Storage (mm)=	2.00	4.48
Average Slope (%)=	0.91	1.12
Length (m)=	246.54	157.18
Mannings n =	0.015	0.300

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr	TIME (hrs)	RAIN mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

			TOTALS
Max.Eff.Inten.(mm/hr)=	41.60	4.97	
over (min)	5.00	80.00	
Storage Coeff. (min)=	6.99 (ii)	77.74 (ii)	
Unit Hyd. Tpeak (min)=	5.00	80.00	
Unit Hyd. peak (cms)=	0.17	0.01	
PEAK FLOW (cms)=	0.56	0.02	0.566 (iii)
TIME TO PEAK (hrs)=	1.00	2.17	1.00
RUNOFF VOLUME (mm)=	20.90	5.36	14.37
TOTAL RAINFALL (mm)=	22.90	22.90	22.90
RUNOFF COEFFICIENT =	0.91	0.23	0.63

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50650)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	8.58	0.566	1.00	14.37

```
       + ID2= 2 (******):     7.02   0.187     1.00     7.15
         ==========================================================
         ID = 3 ( 50650):    15.60   0.753     1.00    11.12

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 ( 50650):    15.60   0.753     1.00    11.12
       + ID2= 2 (******):   179.05   0.650     1.58    11.79
         ==========================================================
         ID = 1 ( 50650):   194.64   0.982     1.00    11.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         129.45        0.0450
                   6.00         129.24        0.0450
                   8.00         128.92        0.0450
                  10.00         128.26        0.0450
                  12.00         127.37        0.0450
                  14.00         126.79        0.0450
                  16.00         126.20        0.0450
                  18.00         125.80        0.0450
                  21.00         125.29        0.0450
                  24.00         124.85        0.0450
                  27.00         124.54        0.0350      Main Channel
                  30.00         124.62        0.0350      Main Channel
                  33.00         124.84    0.0350 /0.0450  Main Channel
                  36.00         125.26        0.0450
                  39.00         125.86        0.0450
                  42.00         126.49        0.0450
                  48.00         128.97        0.0450
                  54.00         129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)         (m/s)      (min)
        0.26   124.80    .390E+03       0.9          0.76       7.18
        0.51   125.06    .124E+04       4.9          1.29       4.21
        0.77   125.31    .239E+04      12.3          1.67       3.25
        1.03   125.57    .380E+04      23.2          1.99       2.73
        1.28   125.83    .544E+04      37.9          2.27       2.40
        1.54   126.08    .731E+04      56.6          2.52       2.15
        1.80   126.34    .937E+04      79.6          2.77       1.96
        2.05   126.60    .116E+05     107.2          3.01       1.81
        2.31   126.85    .140E+05     139.3          3.25       1.67
        2.57   127.11    .165E+05     175.4          3.47       1.57
        2.82   127.37    .191E+05     215.7          3.68       1.48
        3.08   127.62    .219E+05     261.1          3.89       1.39
        3.34   127.88    .247E+05     310.7          4.10       1.32
        3.59   128.14    .276E+05     364.3          4.30       1.26
        3.85   128.40    .307E+05     421.6          4.48       1.21
        4.11   128.65    .338E+05     482.7          4.65       1.17
        4.36   128.91    .371E+05     548.1          4.82       1.13
        4.62   129.17    .406E+05     600.9          4.83       1.13
        4.88   129.42    .446E+05     634.1          4.63       1.17

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50650)  194.64     0.98     1.00   11.74      0.26      0.76
   OUTFLOW: ID= 1 ( 50650)  194.64     0.83     1.08   11.74      0.24      0.76


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--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.06         13.71
     Dep. Storage     (mm)=       2.00          6.10
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     581.73         82.00
     Mannings n           =      0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          4.45
                  over (min)      10.00         55.00
     Storage Coeff.  (min)=      10.07 (ii)    54.07 (ii)
     Unit Hyd. Tpeak (min)=      10.00         55.00
     Unit Hyd. peak  (cms)=       0.11          0.02
                                                    *TOTALS*
     PEAK FLOW       (cms)=       3.82          0.08          3.834 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.75          1.00
     RUNOFF VOLUME    (mm)=      20.90          3.61         16.06
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.16          0.70

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40670):    50.76   3.834     1.00    16.06
       + ID2= 2 ( 60650):   194.64   0.829     1.08    11.74
         ==========================================================
         ID = 3 ( 50670):   245.41   4.609     1.00    12.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         115.77        0.0450
                  20.00         115.51        0.0450
                  24.00         114.73        0.0450
                  28.00         113.17    0.0450 /0.0350  Main Channel
                  32.00         113.16    0.0350 /0.0450  Main Channel
                  36.00         114.68        0.0450
                  40.00         115.05        0.0450
                  44.00         115.27        0.0450
                  48.00         115.46        0.0450
                  52.00         115.71        0.0450
                  54.00         115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)         (m/s)      (min)
        0.14   113.30    .275E+03       0.3          0.60      13.60
        0.27   113.43    .612E+03       1.2          0.93       8.76
        0.41   113.57    .996E+03       2.4          1.18       6.88
        0.55   113.71    .143E+04       4.1          1.39       5.85
        0.69   113.84    .191E+04       6.1          1.57       5.18
        0.82   113.98    .244E+04       8.6          1.73       4.70
        0.96   114.12    .301E+04      11.6          1.87       4.34
        1.10   114.26    .363E+04      14.9          2.00       4.06
        1.24   114.39    .430E+04      18.8          2.12       3.82
        1.37   114.53    .502E+04      23.1          2.24       3.63
        1.51   114.67    .579E+04      27.9          2.34       3.46
        1.65   114.81    .664E+04      32.5          2.38       3.41
        1.78   114.94    .763E+04      37.8          2.41       3.36
        1.92   115.08    .878E+04      44.0          2.44       3.33
        2.06   115.22    .101E+05      50.8          2.45       3.31
        2.20   115.35    .117E+05      58.8          2.46       3.30
        2.33   115.49    .134E+05      68.1          2.47       3.29
        2.47   115.63    .157E+05      74.2          2.30       3.53
        2.61   115.77    .188E+05      85.0          2.20       3.69

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50670)  245.41     4.61     1.00   12.63      0.58      1.43
   OUTFLOW: ID= 1 ( 60670)  245.41     4.36     1.08   12.63      0.57      1.41


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| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.22          4.63
     Dep. Storage     (mm)=       2.00          8.04
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     269.03         47.00
     Mannings n           =      0.015         0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          5.45
                  over (min)      5.00         35.00
     Storage Coeff.  (min)=       5.58 (ii)    34.80 (ii)
     Unit Hyd. Tpeak (min)=       5.00         35.00
     Unit Hyd. peak  (cms)=       0.20          0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.69          0.04          0.696 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.50          1.00
     RUNOFF VOLUME    (mm)=      20.90          3.19         12.95
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.14          0.57

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40700):    10.86   0.696     1.00    12.95
       + ID2= 2 ( 60670):   245.41   4.361     1.08    12.63
         ==========================================================
         ID = 3 ( 50680):   256.26   4.907     1.00    12.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50          0.69
     Dep. Storage     (mm)=       2.00          7.98
     Average Slope     (%)=       0.60          0.60
     Length            (m)=      89.27         69.00
     Mannings n           =      0.015         0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          2.97
                  over (min)      5.00         75.00
     Storage Coeff.  (min)=       4.30 (ii)    74.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00         75.00
     Unit Hyd. peak  (cms)=       0.23          0.02
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.00          0.054 (iii)
     TIME TO PEAK    (hrs)=       1.00          2.17          1.00
     RUNOFF VOLUME    (mm)=      20.90          3.11          9.99
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.14          0.44

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                              IMPERVIOUS    PERVIOUS (i)
```

```
      Surface Area     (ha)=       7.93        17.56
      Dep. Storage     (mm)=       2.00         8.01
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     412.26        40.00
      Mannings n           =      0.015        0.350

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         5.72
                   over (min)        5.00        35.00
      Storage Coeff.  (min)=       6.59 (ii)   30.37 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.18         0.04
                                                      *TOTALS*
      PEAK FLOW       (cms)=       0.80         0.14     0.834 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.50      1.00
      RUNOFF VOLUME    (mm)=      20.90         2.88      7.83
      TOTAL RAINFALL   (mm)=      22.90        22.90     22.90
      RUNOFF COEFFICIENT   =       0.91         0.13      0.34

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.054     1.00     9.99
      + ID2= 2 ( 40690):    25.49   0.834     1.00     7.83
        ================================================
        ID = 3 ( 50690):    26.69   0.888     1.00     7.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   256.26   4.907     1.00    12.65
      + ID2= 2 ( 50690):    26.69   0.888     1.00     7.93
        ================================================
        ID = 3 ( 50700):   282.95   5.795     1.00    12.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation      Manning
                  0.00         109.54       0.0450
                  4.00         108.85       0.0450
                  8.00         108.76       0.0450
                 12.00         108.31       0.0450
                 16.00         107.44       0.0450
                 20.00         107.22       0.0450
                 24.00         107.06       0.0450
                 28.00         107.10       0.0450
                 32.00         107.04       0.0450
                 36.00         106.98       0.0450
                 40.00         106.83       0.0350      Main Channel
                 44.00         106.49       0.0350      Main Channel
                 48.00         106.92    0.0350 /0.0450 Main Channel
                 52.00         107.19       0.0450
                 56.00         107.11       0.0450
                 60.00         107.14       0.0450
                 64.00         107.27       0.0450
                 68.00         107.71       0.0450
                 72.00         108.37       0.0450
                 80.00         109.55       0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  106.60    .128E+03       0.1         0.43       35.47
        0.23  106.72    .513E+03       0.4         0.69       22.34
        0.35  106.83    .115E+04       1.1         0.90       17.05
        0.52  107.00    .277E+04       3.6         1.21       12.69
        0.69  107.17    .675E+04       8.9         1.21       12.64
        0.86  107.34    .135E+05      19.9         1.35       11.35
        1.02  107.51    .211E+05      36.3         1.58        9.70
        1.19  107.68    .291E+05      57.8         1.82        8.39
        1.36  107.85    .375E+05      84.0         2.06        7.43
        1.53  108.02    .461E+05     114.5         2.28        6.71
        1.70  108.19    .550E+05     149.1         2.49        6.15
        1.87  108.35    .642E+05     187.4         2.68        5.71
        2.04  108.52    .737E+05     228.8         2.85        5.37
        2.21  108.69    .837E+05     274.1         3.01        5.09
        2.37  108.86    .942E+05     316.2         3.08        4.97
        2.54  109.03    .105E+06     372.6         3.25        4.72
        2.71  109.20    .117E+06     433.4         3.40        4.50
        2.88  109.37    .129E+06     498.6         3.55        4.31
        3.05  109.54    .141E+06     568.2         3.70        4.14

                                   <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50700)  282.95     5.79    1.00  12.20       0.59      1.21
    OUTFLOW: ID= 1 ( 60700)  282.95     4.46    1.17  12.20       0.54      1.21

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| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.57         4.79
      Dep. Storage     (mm)=       2.00         8.94
      Average Slope     (%)=       3.90         3.90
      Length            (m)=     205.82        41.00
      Mannings n           =      0.015        0.360

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         5.31
                   over (min)        5.00        30.00
      Storage Coeff.  (min)=       4.05 (ii)   27.67 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.24         0.04
                                                      *TOTALS*
      PEAK FLOW       (cms)=       0.15         0.04      0.164 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.42      1.00
      RUNOFF VOLUME    (mm)=      20.90         2.70      6.47
      TOTAL RAINFALL   (mm)=      22.90        22.90     22.90
      RUNOFF COEFFICIENT   =       0.91         0.12      0.28

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.164     1.00     6.47
      + ID2= 2 ( 60700):   282.95   4.462     1.17    12.20
        ================================================
        ID = 3 ( 50710):   289.31   4.509     1.17    12.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.12         3.92
      Dep. Storage     (mm)=       2.00         5.64
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     408.55        40.00
      Mannings n           =      0.015        0.270

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60        13.05
                   over (min)        5.00        15.00
      Storage Coeff.  (min)=       6.62 (ii)   11.37 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.18         0.09
                                                      *TOTALS*
      PEAK FLOW       (cms)=       2.38         0.08      2.445 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.08      1.00
      RUNOFF VOLUME    (mm)=      20.90         3.92     18.13
      TOTAL RAINFALL   (mm)=      22.90        22.90     22.90
      RUNOFF COEFFICIENT   =       0.91         0.17      0.79

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |   0.7080      1.0040
                          0.2890      0.3890   |   0.7750      1.0700
                          0.3270      0.4500   |   0.9210      1.2580
                          0.3600      0.6030   |   1.0000      1.3280
                          0.3900      0.6540   |   1.0820      1.3980
                          0.4190      0.7110   |   1.1670      1.4690
                          0.4450      0.7680   |   1.2550      1.5390
                          0.4700      0.8260   |   1.3460      1.6090
                          0.4960      0.8830   |   1.9470      1.9930
                          0.6450      0.9400   |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)      25.037     2.445      1.00       18.13
   OUTFLOW: ID= 1 ( 70150)      25.037     0.273      1.33       18.11
   OVERFLOW:ID= 3 (  0003)       0.000     0.000      0.00        0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.15
                  TIME SHIFT OF PEAK FLOW          (min)= 20.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3674

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  | Junction Command(70151) |
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                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3( 70150)      0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70151)      0.00      0.00    0.00      0.00

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--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.76         3.40
      Dep. Storage     (mm)=       2.00         6.50
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     307.19        41.00
      Mannings n           =      0.015        0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
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                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         8.31
                over (min)        5.00        25.00
     Storage Coeff.  (min)=       5.52 (ii)   24.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.20         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.22         0.04          1.234 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.33           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.40          16.52
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.15           0.72


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    0.2230      0.3310
                         0.0580      0.0840   |    0.2500      0.3590
                         0.0780      0.1040   |    0.2790      0.3870
                         0.0930      0.1240   |    0.3090      0.4160
                         0.1060      0.1440   |    0.3750      0.4780
                         0.1180      0.1640   |    0.4110      0.5120
                         0.1280      0.1840   |    0.4470      0.5450
                         0.1590      0.2550   |    0.5250      0.6130
                         0.1770      0.2790   |    0.7390      0.9130
                         0.1990      0.3030   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)    14.155     1.234      1.00      16.52
   OUTFLOW: ID= 1 ( 70160)    14.155     0.129      1.42      16.50
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.48
                  TIME SHIFT OF PEAK FLOW          (min)= 25.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1871

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  --------------------------
  | Junction Command(70161) |
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                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00

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--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   289.31   4.509     1.17    12.08
      + ID2= 2 ( 70150):    25.04   0.273     1.33    18.11
        ==================================================
        ID = 3 ( 50730):   314.34   4.773     1.17    12.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   314.34   4.773     1.17    12.56
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50730):   314.34   4.773     1.17    12.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50730):   314.34   4.773     1.17    12.56
      + ID2= 2 ( 70160):    14.15   0.129     1.42    16.50
        ==================================================
        ID = 3 ( 50730):   328.50   4.900     1.17    12.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   328.50   4.900     1.17    12.73
      + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50730):   328.50   4.900     1.17    12.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         96.28        0.0450
                   9.00         95.39        0.0450
                  12.00         94.87        0.0450
                  15.00         94.17        0.0450
                  18.00         93.95        0.0450
                  21.00         94.01        0.0450
                  24.00         93.92        0.0450
                  27.00         93.98    0.0450 /0.0350  Main Channel
                  30.00         93.33        0.0350      Main Channel
                  32.00         93.73    0.0350 /0.0450  Main Channel
                  34.00         94.58        0.0450
                  35.00         95.06        0.0450
                  40.00         95.32        0.0450
                  45.00         96.12        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.46    .164E+03       0.0         0.36      89.51
        0.26   93.60    .654E+03       0.2         0.57      56.39
        0.40   93.73    .147E+04       0.6         0.75      43.03
        0.55   93.88    .274E+04       1.4         0.99      32.63
        0.70   94.03    .550E+04       2.8         1.00      32.28
        0.85   94.18    .104E+05       5.8         1.08      29.94
        1.00   94.33    .159E+05      10.1         1.24      26.04
        1.15   94.48    .216E+05      15.6         1.41      22.97
        1.29   94.63    .275E+05      22.2         1.57      20.64
        1.44   94.78    .338E+05      29.9         1.72      18.84
        1.59   94.93    .404E+05      38.6         1.86      17.44
        1.74   95.08    .473E+05      48.0         1.97      16.40
        1.89   95.23    .549E+05      58.1         2.05      15.76
        2.04   95.38    .637E+05      70.1         2.14      15.14
        2.19   95.53    .731E+05      83.0         2.21      14.67
        2.34   95.68    .833E+05      97.5         2.27      14.23
        2.49   95.83    .941E+05     113.5         2.34      13.82
        2.64   95.98    .106E+06     131.2         2.41      13.42
        2.79   96.13    .118E+06     150.7         2.48      13.05

                                  <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  328.50     4.90    1.17  12.73      0.80      1.06
   OUTFLOW: ID= 1 ( 60730)  328.50     2.93    1.50  12.73      0.70      1.01


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--------------------
| CALIB            |
| STANDHYD ( 40770)|   Area     (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          56.24          13.19
     Dep. Storage     (mm)=           2.00           5.50
     Average Slope     (%)=           1.70           1.70
     Length            (m)=         680.34          43.00
     Mannings n           =          0.015          0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         7.96
                over (min)       10.00        35.00
     Storage Coeff.  (min)=      10.65 (ii)   32.96 (ii)
     Unit Hyd. Tpeak (min)=      10.00        35.00
     Unit Hyd. peak  (cms)=       0.11         0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       5.72         0.13          5.765 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.42           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.91          17.50
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.17           0.76


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    3.6700      4.7800
                         0.2600      1.6200   |    8.6400      6.0000
                         1.4500      2.7100   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)    69.429     5.765      1.00      17.50
   OUTFLOW: ID= 1 ( 70170)    69.429     0.175      1.92      17.48
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  3.03
                  TIME SHIFT OF PEAK FLOW          (min)= 55.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.0889

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  --------------------------
  | Junction Command(70171) |
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                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00

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--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 60730):   328.50   2.931     1.50    12.73
      + ID2= 2 ( 70170):    69.43   0.175     1.92    17.48
        ==================================================
        ID = 3 ( 50770):   397.93   3.099     1.50    13.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50770):   397.93   3.099     1.50    13.55
      + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50770):   397.93   3.099     1.50    13.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         92.38        0.0450
                   3.00         90.34        0.0450
                   6.00         89.94        0.0450
                   9.00         89.83        0.0450
                  12.00         89.80        0.0450
                  15.00         89.72        0.0450
                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15        0.0350      Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76        0.0450
                  30.00         89.78        0.0450
                  33.00         89.79        0.0450
                  36.00         89.80        0.0450
                  39.00         89.72        0.0450
                  42.00         90.35        0.0450
                  45.00         91.36        0.0450
```

```
                  48.00         92.10        0.0450
                  51.00         92.21        0.0450
                  54.00         92.34        0.0450
                  56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   89.29    .298E+02       0.0         0.31       13.27
        0.29   89.44    .119E+03       0.2         0.50        8.36
        0.44   89.58    .268E+03       0.7         0.65        6.38
        0.61   89.76    .588E+03       1.9         0.79        5.25
        0.78   89.93    .179E+04       5.1         0.71        5.86
        0.96   90.10    .329E+04      11.4         0.87        4.79
        1.13   90.27    .489E+04      20.2         1.03        4.03
        1.30   90.45    .656E+04      31.5         1.19        3.47
        1.47   90.62    .828E+04      45.0         1.35        3.06
        1.65   90.79    .100E+05      60.5         1.50        2.76
        1.82   90.97    .118E+05      77.9         1.64        2.53
        1.99   91.14    .136E+05      97.1         1.77        2.34
        2.17   91.31    .155E+05     118.1         1.90        2.18
        2.34   91.48    .173E+05     140.6         2.02        2.06
        2.51   91.66    .193E+05     164.7         2.13        1.95
        2.68   91.83    .212E+05     190.5         2.23        1.86
        2.86   92.00    .232E+05     218.0         2.33        1.78
        3.03   92.18    .253E+05     242.7         2.39        1.74
        3.20   92.35    .275E+05     262.6         2.37        1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  397.93     3.10    1.50  13.55       0.68       0.76
   OUTFLOW: ID= 1 ( 60770)  397.93     3.05    1.67  13.55       0.67       0.76


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78        11.79
     Dep. Storage     (mm)=       2.00         8.70
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     404.74        43.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.86
                   over (min)       10.00        45.00
     Storage Coeff.  (min)=       8.10 (ii)   42.98 (ii)
     Unit Hyd. Tpeak (min)=      10.00        45.00
     Unit Hyd. peak  (cms)=       0.13         0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.34         0.06          1.353 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.67          1.00
     RUNOFF VOLUME    (mm)=      20.90         2.61         11.76
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.11          0.51


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57   1.353     1.00    11.76
     + ID2= 2 ( 60770):   397.93   3.046     1.67    13.55
       ==========================================================
       ID = 3 ( 50780):   422.50   3.193     1.58    13.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         7.11
                   over (min)        5.00        40.00
     Storage Coeff.  (min)=       6.23 (ii)   35.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.19         0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.59         0.03          0.593 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.50          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.97         14.60
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.17          0.64


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        19.76
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.71 (ii)   18.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.07          0.192 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.17          1.00
     RUNOFF VOLUME    (mm)=      21.90         7.34         12.39
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.96         0.32          0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50790)|
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```
   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40805):     3.57   0.192     1.00    12.39
      + ID2= 2 ( 70180):    13.33   0.013     3.08    16.28
        ==================================================
        ID = 3 ( 50790):    16.90   0.204     1.00    15.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50790):    16.90   0.204     1.00    15.46
      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50790):    16.90   0.204     1.00    15.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50780):   422.50   3.193     1.58    13.45
      + ID2= 2 ( 50790):    16.90   0.204     1.00    15.46
        ==================================================
        ID = 3 ( 50800):   439.40   3.236     1.58    13.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         88.54        0.0450
                   3.00         88.18        0.0450
                   6.00         87.54        0.0450
                   9.00         87.44        0.0450
                  12.00         87.13        0.0450
                  15.00         87.23        0.0450
                  18.00         87.18        0.0450
                  21.00         86.49    0.0450 /0.0350  Main Channel
                  24.00         85.82        0.0350      Main Channel
                  27.00         86.44    0.0350 /0.0450  Main Channel
                  30.00         87.18        0.0450
                  33.00         87.16        0.0450
                  36.00         87.25        0.0450
                  39.00         87.46        0.0450
                  42.00         87.70        0.0450
                  45.00         87.80        0.0450
                  48.00         88.00        0.0450
                  49.00         88.12        0.0450
                  50.00         88.23        0.0450
                  52.00         88.59        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.12   85.95    .779E+02        0.0         0.37      48.75
        0.25   86.07    .312E+03        0.2         0.59      30.71
        0.37   86.19    .701E+03        0.5         0.77      23.44
        0.49   86.32    .125E+04        1.1         0.94      19.35
        0.62   86.44    .195E+04        1.9         1.09      16.67
        0.77   86.59    .299E+04        3.8         1.36      13.29
        0.92   86.74    .424E+04        6.2         1.59      11.42
        1.07   86.89    .570E+04        9.3         1.77      10.25
        1.22   87.04    .736E+04       13.0         1.92       9.44
        1.37   87.19    .938E+04       16.8         1.94       9.33
        1.52   87.34    .134E+05       22.9         1.86       9.74
        1.66   87.49    .182E+05       31.1         1.86       9.72
        1.81   87.64    .237E+05       41.6         1.91       9.51
        1.96   87.79    .298E+05       53.9         1.96       9.22
        2.11   87.94    .365E+05       68.9         2.05       8.84
        2.26   88.09    .437E+05       86.5         2.15       8.43
        2.41   88.24    .513E+05      106.2         2.25       8.04
        2.56   88.39    .592E+05      128.2         2.36       7.69
        2.71   88.54    .674E+05      152.5         2.46       7.36

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  439.40     3.24     1.58  13.53       0.72      1.27
   OUTFLOW: ID= 1 ( 60800)  439.40     3.08     1.75  13.53       0.71      1.24


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--------------------
| CALIB            |
| STANDHYD ( 40820)|   Area     (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         11.23
     Dep. Storage     (mm)=       2.00          9.57
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     307.74         44.00
     Mannings n           =      0.015         0.390

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.97
                  over (min)        5.00        45.00
     Storage Coeff.  (min)=       6.04 (ii)    44.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00        45.00
     Unit Hyd. peak  (cms)=       0.19         0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.05        0.220 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.67         1.00
     RUNOFF VOLUME    (mm)=      20.90         2.11         4.54
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.09         0.20

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  73.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40820):    14.21   0.220     1.00     4.54
      + ID2= 2 ( 60800):   439.40   3.082     1.75    13.53
        ==================================================
        ID = 3 ( 50820):   453.60   3.130     1.75    13.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50500):  1213.24  10.345     1.42    10.86
      + ID2= 2 ( 50820):   453.60   3.130     1.75    13.25
        ==================================================
        ID = 3 ( 50830):  1666.85  12.981     1.50    11.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         82.12        0.0450
                  20.00         81.53        0.0450
                  24.00         81.26        0.0450
                  28.00         81.27        0.0450
                  32.00         80.34    0.0450 /0.0350  Main Channel
                  36.00         79.95        0.0350      Main Channel
                  40.00         80.78        0.0450
                  44.00         81.45        0.0450
                  48.00         81.53        0.0450
                  52.00         81.49        0.0450
                  56.00         81.51        0.0450
                  60.00         81.58        0.0450
                  64.00         81.58        0.0450
                  68.00         81.61        0.0450
                  72.00         81.75        0.0450
                  80.00         82.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.10   80.05    .555E+01        0.0         0.24       5.45
        0.19   80.14    .222E+02        0.1         0.38       3.43
        0.29   80.24    .499E+02        0.3         0.50       2.62
        0.39   80.34    .888E+02        0.7         0.60       2.16
        0.50   80.45    .146E+03        1.4         0.77       1.68
        0.62   80.57    .213E+03        2.5         0.91       1.43
        0.73   80.68    .290E+03        3.8         1.02       1.27
        0.85   80.80    .375E+03        5.4         1.13       1.15
        0.96   80.91    .471E+03        7.6         1.26       1.03
        1.08   81.03    .578E+03       10.1         1.37       0.95
        1.19   81.14    .695E+03       13.0         1.46       0.89
        1.31   81.26    .823E+03       16.2         1.53       0.85
        1.43   81.37    .100E+04       19.7         1.53       0.85
        1.54   81.49    .121E+04       24.1         1.56       0.84
        1.66   81.60    .155E+04       29.0         1.46       0.89
        1.77   81.72    .204E+04       36.4         1.39       0.93
        1.89   81.84    .259E+04       45.6         1.38       0.95
        2.00   81.95    .320E+04       56.7         1.38       0.94
        2.12   82.07    .387E+04       69.6         1.40       0.93

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1666.85    12.98     1.50  11.51       1.19      1.46
   OUTFLOW: ID= 1 ( 60830) 1666.85    12.99     1.50  11.51       1.19      1.46


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--------------------
| CALIB            |
| STANDHYD ( 40830)|   Area     (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36         15.15
     Dep. Storage     (mm)=       2.00          5.54
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     550.83         40.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.87
                  over (min)       10.00        30.00
     Storage Coeff.  (min)=      10.17 (ii)    27.20 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.11         0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.54         0.32        2.670 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.33         1.00
     RUNOFF VOLUME    (mm)=      20.90         5.22        13.60
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.23         0.59

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area     (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45          1.59
     Dep. Storage     (mm)=       2.00          9.61
     Average Slope     (%)=       3.20          3.20
     Length            (m)=     116.69         69.00
     Mannings n           =      0.015         0.370

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
```

```
                over (min)        5.00        50.00
     Storage Coeff.  (min)=       3.06 (ii)   47.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00        50.00
     Unit Hyd. peak  (cms)=       0.27         0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.03         0.01          0.035 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.75          1.00
     RUNOFF VOLUME    (mm)=      20.90         2.22          4.90
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.10          0.21

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  75.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40830):    45.51   2.670     1.00    13.60
     + ID2= 2 ( 40840):     2.04   0.035     1.00     4.90
       ====================================================
       ID = 3 ( 50840):    47.56   2.705     1.00    13.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |        AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50840):    47.56   2.705     1.00    13.23
     + ID2= 2 ( 60830):  1666.85  12.989     1.50    11.51
       ====================================================
       ID = 1 ( 50840):  1714.40  13.727     1.42    11.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                 0.00         82.18        0.0450
                32.00         79.04        0.0450
                40.00         78.76        0.0450
                48.00         78.58        0.0450
                56.00         78.21        0.0450
                64.00         76.89        0.0350      Main Channel
                72.00         78.08        0.0450
                80.00         79.44        0.0450
                88.00         80.28        0.0450
                96.00         80.92        0.0450
               104.00         81.29        0.0450
               112.00         81.62        0.0450
               120.00         81.76        0.0450
               128.00         81.81        0.0450
               140.00         82.02        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.27   77.16    .320E+03        0.2        0.48      24.00
        0.54   77.43    .128E+04        1.4        0.75      15.12
        0.81   77.70    .288E+04        4.2        0.99      11.54
        1.08   77.97    .512E+04        9.0        1.20       9.53
        1.35   78.24    .799E+04       16.6        1.42       8.02
        1.62   78.51    .119E+05       26.9        1.54       7.40
        1.89   78.78    .176E+05       41.0        1.59       7.15
        2.16   79.05    .252E+05       62.9        1.71       6.68
        2.43   79.32    .341E+05       93.9        1.89       6.05
        2.70   79.59    .438E+05      131.1        2.05       5.56
        2.97   79.86    .544E+05      175.1        2.20       5.18
        3.24   80.13    .660E+05      226.4        2.35       4.86
        3.51   80.40    .787E+05      284.9        2.48       4.60
        3.77   80.67    .924E+05      351.1        2.60       4.39
        4.04   80.94    .107E+06      425.7        2.72       4.20
        4.31   81.21    .124E+06      507.1        2.81       4.06
        4.58   81.48    .141E+06      598.4        2.90       3.94
        4.85   81.75    .161E+06      695.9        2.96       3.86
        5.12   82.02    .185E+06      800.9        2.97       3.85

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 1714.40   13.73    1.42  11.56      1.25      1.33
   OUTFLOW: ID= 1 ( 60840) 1714.40   13.38    1.50  11.56      1.23      1.32

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--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14        18.19
     Dep. Storage     (mm)=       2.00         7.29
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     418.93       142.00
     Mannings n           =      0.015        0.310

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.13
                   over (min)       10.00        80.00
     Storage Coeff.  (min)=       7.59 (ii)   76.22 (ii)
     Unit Hyd. Tpeak (min)=      10.00        80.00
     Unit Hyd. peak  (cms)=       0.13         0.01
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.71         0.08          0.723 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.25          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.15          7.51
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.14          0.33

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40850):    26.33   0.723     1.00     7.51
     + ID2= 2 ( 60840):  1714.40  13.384     1.50    11.56
       ====================================================
       ID = 3 ( 50850):  1740.73  13.488     1.50    11.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77        35.37
     Dep. Storage     (mm)=       2.00         8.79
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     611.77       120.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.63
                   over (min)       10.00        90.00
     Storage Coeff.  (min)=      10.83 (ii)   89.38 (ii)
     Unit Hyd. Tpeak (min)=      10.00        90.00
     Unit Hyd. peak  (cms)=       0.11         0.01
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.96         0.11          1.967 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.42          1.00
     RUNOFF VOLUME    (mm)=      20.90         2.79          8.94
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.12          0.39

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                 0.00         85.55        0.0450
                24.00         85.23        0.0450
                28.00         85.17        0.0450
                32.00         85.07        0.0450
                36.00         84.96        0.0350      Main Channel
                40.00         84.96        0.0350      Main Channel
                44.00         85.00    0.0350 /0.0450  Main Channel
                48.00         85.03        0.0450
                52.00         85.18        0.0450
                56.00         85.22        0.0450
                60.00         85.31        0.0450
                64.00         85.33        0.0450
                68.00         85.38        0.0450
                80.00         85.59        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.01   84.96    .992E+01        0.0        0.05     238.32
        0.04   84.99    .159E+03        0.0        0.21      57.53
        0.07   85.03    .408E+03        0.2        0.32      38.32
        0.10   85.06    .751E+03        0.4        0.40      30.54
        0.13   85.09    .114E+04        0.7        0.47      25.77
        0.16   85.12    .158E+04        1.2        0.53      22.66
        0.19   85.15    .206E+04        1.7        0.59      20.45
        0.22   85.18    .259E+04        2.3        0.64      18.91
        0.25   85.21    .321E+04        3.0        0.67      18.12
        0.29   85.24    .393E+04        3.8        0.70      17.32
        0.32   85.27    .473E+04        4.8        0.73      16.56
        0.35   85.30    .562E+04        5.9        0.76      15.89
        0.38   85.34    .663E+04        7.0        0.77      15.69
        0.41   85.37    .777E+04        8.5        0.80      15.20
        0.44   85.40    .902E+04       10.2        0.82      14.69
        0.47   85.43    .104E+05       12.2        0.85      14.19
        0.50   85.46    .118E+05       14.3        0.88      13.73
        0.53   85.49    .133E+05       16.7        0.91      13.31
        0.56   85.52    .150E+05       19.3        0.94      12.91

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40880)   56.14     1.97    1.00   8.94      0.21      0.61
   OUTFLOW: ID= 1 ( 60880)   56.14     1.26    1.17   8.92      0.17      0.54

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--------------------
| ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
| DT=  5.0 min     |     Length        (m)= 888.03
--------------------     Slope       (m/m)=  0.004
                         Manning n         =  0.013

      <----------------- TRAVEL TIME TABLE ------------------->
       DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
         (m)     (cu.m.)      (cms)       (m/s)        min
        0.10   .213E+03        0.2        0.93        15.91
        0.20   .426E+03        0.7        1.41        10.53
        0.30   .639E+03        1.3        1.76         8.42
        0.40   .853E+03        2.0        2.04         7.25
        0.50   .107E+04        2.7        2.27         6.51
        0.60   .128E+04        3.6        2.47         5.99
        0.70   .149E+04        4.4        2.64         5.60
        0.80   .171E+04        5.4        2.79         5.30
        0.90   .192E+04        6.3        2.92         5.06
        1.00   .213E+04        7.3        3.04         4.87
        1.10   .234E+04        8.3        3.15         4.71
        1.20   .256E+04        9.3        3.24         4.57
        1.30   .277E+04       10.4        3.33         4.45
        1.40   .298E+04       11.4        3.40         4.35
        1.50   .320E+04       12.5        3.48         4.26
        1.60   .341E+04       13.6        3.54         4.18
        1.70   .362E+04       14.7        3.60         4.11
        1.80   .384E+04       15.8        3.66         4.05
        1.90   .405E+04       16.9        3.71         3.99

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60880)   56.14     1.26    1.17   8.92      0.30      1.75
   OUTFLOW: ID= 1 ( 80880)   56.14     1.15    1.25   8.92      0.28      1.67

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| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
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```
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       18.24         23.47
     Dep. Storage     (mm)=        2.00          8.20
     Average Slope     (%)=        1.10          1.10
     Length            (m)=      527.32         85.00
     Mannings n           =       0.015         0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.30
                   over (min)       10.00        75.00
     Storage Coeff.  (min)=      10.42 (ii)   74.02 (ii)
     Unit Hyd. Tpeak (min)=      10.00        75.00
     Unit Hyd. peak  (cms)=       0.11         0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.42         0.11        1.432 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.17         1.00
     RUNOFF VOLUME    (mm)=      20.90         3.03         8.90
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.13         0.39

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  75.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40900)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        8.41          5.15
     Dep. Storage     (mm)=        1.00          7.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=      300.67         43.00
     Mannings n           =       0.015         0.310

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        14.70
                   over (min)       10.00        30.00
     Storage Coeff.  (min)=       7.65 (ii)   25.71 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.13         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.72         0.09        0.760 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.33         1.00
     RUNOFF VOLUME    (mm)=      21.90         4.54        12.87
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.96         0.20         0.56

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------     (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  13.56      0.76      1.00   12.87
     ================================================
     MAJOR SYS.(ID= 2):   0.00      0.00      0.00    0.00
     MINOR SYS.(ID= 3):  13.56      0.76      1.00   12.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71   1.432     1.00     8.90
      + ID2= 2 ( 50850):  1740.73  13.488     1.50    11.50
        ================================================
        ID = 3 ( 50890):  1782.44  13.747     1.50    11.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1782.44  13.747     1.50    11.43
      + ID2= 2 ( 80880):    56.14   1.151     1.25     8.92
        ================================================
        ID = 1 ( 50890):  1838.58  14.605     1.50    11.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  1838.58  14.605     1.50    11.36
      + ID2= 2 ( 90020):    13.56   0.760     1.00    12.87
        ================================================
        ID = 3 ( 50890):  1852.14  14.753     1.50    11.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         79.05        0.0450
                  2.00         78.40        0.0450
                  4.00         77.75        0.0450
                  6.00         77.16        0.0450
                  8.00         76.78        0.0450
                 10.00         76.65        0.0450
                 12.00         76.60        0.0450
                 14.00         76.58        0.0450
                 16.00         76.08        0.0450
                 18.00         75.49    0.0450 /0.0350  Main Channel
                 20.00         75.46        0.0350      Main Channel
                 22.00         75.52    0.0350 /0.0450  Main Channel
                 24.00         76.15        0.0450
                 26.00         76.44        0.0450
                 28.00         76.56        0.0450
                 30.00         76.68        0.0450
                 32.00         76.86        0.0450
                 34.00         77.01        0.0450
                 36.00         77.10        0.0450
                 40.00         79.16        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.03    75.49    .127E+02        0.0         0.14      32.03
       0.22    75.68    .231E+03        0.6         0.69       6.29
       0.40    75.87    .510E+03        2.0         1.01       4.28
       0.59    76.05    .849E+03        4.1         1.25       3.45
       0.78    76.24    .125E+04        6.9         1.43       3.02
       0.97    76.43    .175E+04       10.6         1.57       2.75
       1.15    76.62    .240E+04       14.6         1.57       2.75
       1.34    76.80    .343E+04       21.1         1.60       2.71
       1.53    76.99    .465E+04       30.1         1.68       2.58
       1.71    77.18    .605E+04       41.3         1.77       2.44
       1.90    77.36    .754E+04       55.7         1.92       2.26
       2.09    77.55    .908E+04       72.1         2.06       2.10
       2.27    77.74    .107E+05       90.6         2.20       1.96
       2.46    77.92    .123E+05      111.1         2.34       1.84
       2.65    78.11    .140E+05      133.5         2.48       1.74
       2.84    78.30    .157E+05      157.9         2.61       1.66
       3.02    78.49    .175E+05      184.1         2.73       1.58
       3.21    78.67    .193E+05      212.1         2.85       1.52
       3.40    78.86    .211E+05      242.1         2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50890) 1852.14    14.75     1.50   11.37      1.16      1.57
OUTFLOW: ID= 1 ( 60900) 1852.14    14.68     1.50   11.37      1.16      1.57

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        4.77          2.15
     Dep. Storage     (mm)=        2.00          7.07
     Average Slope     (%)=        1.70          1.70
     Length            (m)=      214.73         44.00
     Mannings n           =       0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        19.01
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       5.33 (ii)   21.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.21         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.42         0.06        0.450 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.25         1.00
     RUNOFF VOLUME    (mm)=      20.90         5.29        13.55
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.23         0.59

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92   0.450     1.00    13.55
      + ID2= 2 ( 60900):  1852.14  14.682     1.50    11.37
        ================================================
        ID = 3 ( 50910):  1859.05  14.750     1.50    11.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.006 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.332
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.233

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  17.88   Curve Number   (CN)= 85.0
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```
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 ------------------   U.H. Tp(hrs)=   0.36

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   1.897

     PEAK FLOW       (cms)=   0.314 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   5.364
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 ------------------   U.H. Tp(hrs)=   0.19

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.012 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.352
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    17.88   0.314     1.25     5.36
     + ID2= 2 (******):     0.44   0.012     1.08     5.35
       ================================================
       ID = 3 (******):    18.32   0.322     1.25     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 ------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.070

     PEAK FLOW       (cms)=   0.010 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.348
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 ------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   1.207

     PEAK FLOW       (cms)=   0.186 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.361
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.33   0.010     1.08     5.35
     + ID2= 2 (******):     7.90   0.186     1.08     5.36
       ================================================
       ID = 3 (******):     8.23   0.195     1.08     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.19   0.006     1.00     5.33
     + ID2= 2 (******):    18.32   0.322     1.25     5.36
       ================================================
       ID = 3 (******):    18.51   0.325     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 ------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    18.51   0.325     1.17     5.36
     + ID2= 2 (******):     8.23   0.195     1.08     5.36
       ================================================
       ID = 1 (******):    26.74   0.512     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
 ------------------

                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          5.79          0.06
     Dep. Storage     (mm)=          2.00          4.48
     Average Slope     (%)=          1.70          1.00
     Length            (m)=         78.30          0.00
     Mannings n             =       0.013         0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.38
                  over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.67 (ii)    2.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.29         0.29
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.67         0.00          0.672 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.00           1.00
     RUNOFF VOLUME    (mm)=      20.90         5.36          20.74
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.23           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     5.85   0.672     1.00    20.74
     + ID2= 2 (******):     0.00   0.000     1.00    20.64
       ================================================
       ID = 3 (******):     5.85   0.672     1.00    20.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.00   0.000     1.00    17.74
     + ID2= 2 (******):     0.00   0.000     1.00    20.64
       ================================================
       ID = 3 (******):     0.00   0.000     1.00    20.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 ------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     0.00   0.000     1.00    20.48
     + ID2= 2 (******):     5.85   0.672     1.00    20.74
       ================================================
       ID = 1 (******):     5.85   0.672     1.00    20.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         426.51        0.0450
                    0.98         426.14        0.0350      Main Channel
                    2.04         426.14        0.0350      Main Channel
                   20.51         426.51        0.0350      Main Channel

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.00   426.14    .579E+00       0.0          0.03      191.52
        0.02   426.16    .114E+02       0.0          0.14       39.52
        0.04   426.18    .285E+02       0.0          0.19       27.56
        0.06   426.20    .520E+02       0.0          0.24       22.17
        0.08   426.22    .818E+02       0.1          0.28       18.92
        0.10   426.24    .118E+03       0.1          0.32       16.68
        0.12   426.26    .161E+03       0.2          0.36       15.02
        0.14   426.27    .210E+03       0.3          0.39       13.73
        0.16   426.29    .265E+03       0.3          0.42       12.69
        0.18   426.31    .326E+03       0.5          0.45       11.82
        0.20   426.33    .394E+03       0.6          0.48       11.10
        0.22   426.35    .469E+03       0.7          0.51       10.47
        0.24   426.37    .549E+03       0.9          0.54        9.93
        0.26   426.39    .637E+03       1.1          0.56        9.46
        0.28   426.41    .730E+03       1.3          0.59        9.03
        0.30   426.43    .830E+03       1.6          0.62        8.65
        0.32   426.45    .936E+03       1.9          0.64        8.31
        0.34   426.47    .105E+04       2.2          0.67        8.01
        0.35   426.49    .117E+04       2.5          0.69        7.72
```

```
                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    5.85     0.67    1.00  20.74      0.21      0.50
   OUTFLOW: ID= 1 (******)    5.85     0.61    1.00  20.57      0.20      0.48


--------------------------------------------------------------------------------
--------------------
| ROUTEPIPE(******)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
| DT=  5.0 min     |     Length       (m)= 372.00
--------------------     Slope      (m/m)=  0.004
                         Manning n       =  0.013

     <----------------- TRAVEL TIME TABLE ---------------------->
       DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
        (m)      (cu.m.)      (cms)        (m/s)        min
       0.05     .423E+02       0.1          0.58        10.67
       0.09     .846E+02       0.2          0.90         6.89
       0.14     .127E+03       0.4          1.15         5.39
       0.19     .169E+03       0.6          1.36         4.55
       0.24     .211E+03       0.9          1.55         4.01
       0.28     .254E+03       1.2          1.71         3.63
       0.33     .296E+03       1.5          1.85         3.34
       0.38     .338E+03       1.8          1.99         3.12
       0.43     .381E+03       2.2          2.11         2.94
       0.47     .423E+03       2.5          2.22         2.80
       0.52     .465E+03       2.9          2.32         2.67
       0.57     .507E+03       3.3          2.41         2.57
       0.62     .550E+03       3.7          2.50         2.48
       0.66     .592E+03       4.1          2.58         2.40
       0.71     .634E+03       4.5          2.66         2.33
       0.76     .677E+03       5.0          2.73         2.27
       0.81     .719E+03       5.4          2.80         2.21
       0.85     .761E+03       5.9          2.86         2.17
       0.90     .804E+03       6.3          2.92         2.12
                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    4.11     0.39    1.00  17.74      0.14      1.15
   OUTFLOW: ID= 1 (******)    4.11     0.39    1.00  17.74      0.14      1.15


--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.11   0.391     1.00    17.74
      + ID2= 2 (******):    26.74   0.512     1.17     5.36
        ====================================================
        ID = 3 (******):    30.85   0.777     1.08     7.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    30.85   0.777     1.08     7.01
      + ID2= 2 (******):     5.85   0.613     1.00    20.57
        ====================================================
        ID = 1 (******):    36.70   1.385     1.00     9.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         418.26        0.0450
                  40.58         417.27        0.0450
                  68.64         416.80        0.0450
                 140.74         415.56        0.0450
                 163.74         415.03    0.0450 /0.0350  Main Channel
                 211.93         413.30        0.0350      Main Channel
                 250.43         411.92        0.0350      Main Channel
                 258.86         411.77        0.0350      Main Channel
                 276.07         411.80        0.0350      Main Channel
                 290.03         411.70        0.0350      Main Channel
                 294.99         411.74        0.0350      Main Channel
                 298.74         411.97        0.0350      Main Channel
                 309.80         412.64        0.0350      Main Channel
                 321.40         413.39        0.0350      Main Channel
                 332.67         415.03    0.0350 /0.0450  Main Channel
                 344.47         416.63        0.0450
                 360.44         418.31        0.0450
                 381.73         419.43        0.0450
                 385.80         419.95        0.0450
                 389.30         420.75        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.33   412.03    .115E+05      14.5          1.18      13.21
       0.67   412.36    .302E+05      61.5          1.91       8.18
       1.00   412.70    .535E+05     139.9          2.46       6.38
       1.33   413.03    .814E+05     252.5          2.91       5.37
       1.66   413.36    .114E+06     402.0          3.32       4.72
       2.00   413.70    .150E+06     597.3          3.74       4.19
       2.33   414.03    .190E+06     834.3          4.12       3.80
       2.66   414.36    .234E+06    1114.3          4.47       3.50
       2.99   414.69    .281E+06    1439.4          4.80       3.26
       3.33   415.03    .332E+06    1811.8          5.12       3.06
       3.69   415.39    .393E+06    2361.5          5.65       2.77
       4.05   415.75    .459E+06    2978.2          6.10       2.57
       4.41   416.10    .533E+06    3668.2          6.46       2.42
       4.76   416.46    .615E+06    4437.5          6.78       2.31
       5.12   416.82    .705E+06    5290.7          7.05       2.22
       5.48   417.18    .804E+06    6232.2          7.29       2.15
       5.84   417.54    .910E+06    7276.0          7.51       2.08
       6.20   417.90    .102E+07    8417.1          7.74       2.02
       6.56   418.26    .114E+07    9654.5          7.95       1.97

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    36.70     1.38    1.00   9.17      0.03      1.18
   OUTFLOW: ID= 1 (******)    36.70     1.01    1.17   9.17      0.02      1.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   0.383 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   5.365
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    31.02   0.383     1.42     5.36
      + ID2= 2 (******):    36.70   1.013     1.17     9.17
        ====================================================
        ID = 3 (******):    67.72   1.316     1.25     7.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
  Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9


DATE: 02/19/2026                          TIME: 02:35:43

USER:


COMMENTS: _____________________________________________________

--------------------------------------------------------------------------------
  ********************************************
  ** SIMULATION : 5 Year 12 hr 5 min SCS Type I **
  ********************************************

--------------------
|    READ STORM    |    Filename: C:\Users\DPham\AppD
|                  |              ata\Local\Temp\
|                  |              257afcce-e1cf-4cdb-b646-cb15a9fd682a\73c4848a
| Ptotal= 62.92 mm |    Comments: 5 Year 12 hr 5 min SCS Type II CC
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.00    1.57 |  3.08    2.51 |  6.17   11.31 |  9.25    2.20
               0.08    1.57 |  3.17    2.51 |  6.25   11.31 |  9.33    2.20
               0.17    1.57 |  3.25    2.51 |  6.33   11.31 |  9.42    2.20
               0.25    1.57 |  3.33    2.51 |  6.42   11.31 |  9.50    2.20
               0.33    1.57 |  3.42    2.51 |  6.50    5.03 |  9.58    2.20
               0.42    1.57 |  3.50    2.51 |  6.58    5.03 |  9.67    2.20
               0.50    1.57 |  3.58    2.51 |  6.67    5.03 |  9.75    2.20
               0.58    1.57 |  3.67    2.51 |  6.75    5.03 |  9.83    2.20
               0.67    1.57 |  3.75    2.51 |  6.83    5.03 |  9.92    2.20
               0.75    1.57 |  3.83    2.51 |  6.92    5.03 | 10.00    1.26
               0.83    1.57 |  3.92    2.51 |  7.00    3.77 | 10.08    1.26
               0.92    1.57 |  4.00    3.77 |  7.08    3.77 | 10.17    1.26
               1.00    1.57 |  4.08    3.77 |  7.17    3.77 | 10.25    1.26
               1.08    1.57 |  4.17    3.77 |  7.25    3.77 | 10.33    1.26
               1.17    1.57 |  4.25    3.77 |  7.33    3.77 | 10.42    1.26
               1.25    1.57 |  4.33    3.77 |  7.42    3.77 | 10.50    1.26
               1.33    1.57 |  4.42    3.77 |  7.50    3.77 | 10.58    1.26
               1.42    1.57 |  4.50    5.03 |  7.58    3.77 | 10.67    1.26
               1.50    1.57 |  4.58    5.03 |  7.67    3.77 | 10.75    1.26
               1.58    1.57 |  4.67    5.03 |  7.75    3.77 | 10.83    1.26
               1.67    1.57 |  4.75    5.03 |  7.83    3.77 | 10.92    1.26
               1.75    1.57 |  4.83    5.03 |  7.92    3.77 | 11.00    1.26
               1.83    1.57 |  4.92    5.03 |  8.00    2.20 | 11.08    1.26
               1.92    1.57 |  5.00    7.54 |  8.08    2.20 | 11.17    1.26
               2.00    1.88 |  5.08    7.54 |  8.17    2.20 | 11.25    1.26
               2.08    1.88 |  5.17    7.54 |  8.25    2.20 | 11.33    1.26
               2.17    1.88 |  5.25    7.54 |  8.33    2.20 | 11.42    1.26
               2.25    1.88 |  5.33    7.54 |  8.42    2.20 | 11.50    1.26
               2.33    1.88 |  5.42    7.54 |  8.50    2.20 | 11.58    1.26
               2.42    1.88 |  5.50   30.15 |  8.58    2.20 | 11.67    1.26
               2.50    1.88 |  5.58   30.15 |  8.67    2.20 | 11.75    1.26
               2.58    1.88 |  5.67   30.15 |  8.75    2.20 | 11.83    1.26
               2.67    1.88 |  5.75   82.92 |  8.83    2.20 | 11.92    1.26
               2.75    1.88 |  5.83   82.92 |  8.92    2.20 | 12.00    1.26
               2.83    1.88 |  5.92   82.92 |  9.00    2.20 |
               2.92    1.88 |  6.00   11.31 |  9.08    2.20 |
               3.00    2.51 |  6.08   11.31 |  9.17    2.20 |


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.47

     Unit Hyd Qpeak  (cms)=   3.502

     PEAK FLOW       (cms)=   1.742 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  24.759
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.393

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   4.557

     PEAK FLOW       (cms)=   2.252 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  24.701
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.393

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50010)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40010):    43.09   1.742     6.33    24.76
      + ID2= 2 ( 40030):    54.88   2.252     6.33    24.70
```

```
                ==================================================
                ID = 3 ( 50010):    97.97   3.993     6.33    24.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60010)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         160.98        0.0450
                  10.00         160.83        0.0450
                  20.00         160.72        0.0450
                  30.00         160.67        0.0450
                  40.00         160.61        0.0450
                  50.00         160.60        0.0450
                  60.00         160.55        0.0450
                  70.00         160.65        0.0450
                  80.00         159.78        0.0450
                  90.00         157.33    0.0450 /0.0350  Main Channel
                 100.00         157.18        0.0350      Main Channel
                 110.00         158.55        0.0450
                 120.00         160.34        0.0450
                 130.00         160.29        0.0450
                 140.00         160.30        0.0450
                 150.00         160.38        0.0450
                 160.00         160.53        0.0450
                 170.00         160.58        0.0450
                 180.00         160.51        0.0450
                 190.00         160.53        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   157.33    .123E+04        0.4          0.43      57.39
        0.32   157.50    .422E+04        2.5          0.88      27.82
        0.49   157.67    .768E+04        6.3          1.20      20.47
        0.66   157.83    .116E+05       11.5          1.45      16.89
        0.83   158.00    .160E+05       18.2          1.67      14.70
        0.99   158.17    .209E+05       26.5          1.86      13.18
        1.16   158.34    .263E+05       36.3          2.03      12.06
        1.33   158.51    .321E+05       47.9          2.19      11.18
        1.50   158.68    .384E+05       62.7          2.40      10.21
        1.67   158.84    .451E+05       79.9          2.60       9.41
        1.84   159.01    .522E+05       99.0          2.79       8.79
        2.00   159.18    .597E+05      120.2          2.96       8.28
        2.17   159.35    .676E+05      143.3          3.11       7.86
        2.34   159.52    .759E+05      168.5          3.26       7.51
        2.51   159.69    .846E+05      195.8          3.40       7.20
        2.68   159.86    .938E+05      224.4          3.52       6.97
        2.85   160.02    .104E+06      254.6          3.61       6.78
        3.02   160.19    .114E+06      287.5          3.70       6.62
        3.18   160.36    .127E+06      315.8          3.64       6.72

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50010)   97.97     3.99    6.33  24.73      0.39      0.98
   OUTFLOW: ID= 1 ( 60010)   97.97     3.16    6.67  24.72      0.35      0.92


--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 40020)|   Area    (ha)=  51.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       33.87         17.45
     Dep. Storage     (mm)=        2.00          6.20
     Average Slope     (%)=        1.30          1.30
     Length            (m)=      584.91         50.00
     Mannings n           =       0.015         0.290

     Max.Eff.Inten.(mm/hr)=       82.92         62.98
                   over (min)       10.00         25.00
     Storage Coeff.  (min)=        8.00 (ii)    20.08 (ii)
     Unit Hyd. Tpeak (min)=       10.00         25.00
     Unit Hyd. peak  (cms)=        0.13          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        5.57          1.49          6.459 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.25           6.00
     RUNOFF VOLUME    (mm)=       60.92         31.07          47.79
     TOTAL RAINFALL   (mm)=       62.92         62.92          62.92
     RUNOFF COEFFICIENT   =        0.97          0.49           0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50020)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40020):    51.32   6.459     6.00    47.79
      + ID2= 2 ( 60010):    97.97   3.160     6.67    24.72
        ==================================================
        ID = 3 ( 50020):   149.29   6.852     6.00    32.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         153.66        0.0450
                   1.00         153.24        0.0450
                   2.00         152.95        0.0450
                   3.00         152.70        0.0450
                   4.00         152.40        0.0450
                   5.00         152.09        0.0450
                   6.00         151.83        0.0450
                   7.00         151.60        0.0450
                   8.00         151.49    0.0450 /0.0350  Main Channel
                   9.00         151.42        0.0350      Main Channel
                  10.00         151.38        0.0350      Main Channel
                  11.00         151.40        0.0350      Main Channel
                  12.00         151.38        0.0350      Main Channel
                  13.00         151.38        0.0350      Main Channel
                  14.00         151.38        0.0350      Main Channel
                  15.00         151.50    0.0350 /0.0450  Main Channel
                  16.00         151.56        0.0450
                  17.00         151.60        0.0450
                  25.00         153.59        0.0450
                  26.00         153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   151.49    .140E+03        0.2          0.36      10.54
        0.23   151.60    .355E+03        0.9          0.58       6.57
        0.34   151.72    .624E+03        2.0          0.74       5.11
        0.45   151.83    .916E+03        3.6          0.89       4.27
        0.57   151.94    .123E+04        5.5          1.02       3.73
        0.68   152.05    .157E+04        7.8          1.13       3.35
        0.79   152.17    .193E+04       10.5          1.24       3.06
        0.90   152.28    .231E+04       13.6          1.34       2.83
        1.02   152.39    .271E+04       17.1          1.43       2.65
        1.13   152.50    .314E+04       20.9          1.52       2.50
        1.24   152.62    .358E+04       25.2          1.60       2.37
        1.35   152.73    .405E+04       29.8          1.67       2.26
        1.47   152.84    .454E+04       34.9          1.75       2.17
        1.58   152.95    .505E+04       40.3          1.81       2.09
        1.69   153.07    .558E+04       46.2          1.88       2.01
        1.80   153.18    .614E+04       52.6          1.95       1.95
        1.92   153.29    .672E+04       59.4          2.01       1.88
        2.03   153.40    .731E+04       66.7          2.07       1.83
        2.14   153.52    .793E+04       74.5          2.14       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50020)   149.29     6.85    6.00  32.65      0.63      1.08
   OUTFLOW: ID= 1 ( 60020)   149.29     6.84    6.08  32.65      0.63      1.08


--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       52.31         18.38
     Dep. Storage     (mm)=        2.00          6.00
     Average Slope     (%)=        1.20          1.20
     Length            (m)=      686.45         52.00
     Mannings n           =       0.015         0.280

     Max.Eff.Inten.(mm/hr)=       82.92         82.16
                   over (min)       10.00         25.00
     Storage Coeff.  (min)=        9.02 (ii)    20.17 (ii)
     Unit Hyd. Tpeak (min)=       10.00         25.00
     Unit Hyd. peak  (cms)=        0.12          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        7.94          2.06          9.185 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.25           6.00
     RUNOFF VOLUME    (mm)=       60.92         34.20          50.23
     TOTAL RAINFALL   (mm)=       62.92         62.92          62.92
     RUNOFF COEFFICIENT   =        0.97          0.54           0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40040):    70.68   9.185     6.00    50.23
      + ID2= 2 ( 60020):   149.29   6.839     6.08    32.65
        ==================================================
        ID = 3 ( 50220):   219.97  15.684     6.08    38.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.0560
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50220)    219.973    15.684      6.08      38.30
   OUTFLOW: ID= 1 ( 70010)    219.973     3.679      7.25      38.28
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 23.46
                  TIME SHIFT OF PEAK FLOW         (min)= 70.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  4.5590

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  --------------------------
  | Junction Command(70011) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH   70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH    0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   219.97   3.679     7.25    38.28
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 3 ( 70012):   219.97   3.679     7.25    38.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         148.49        0.0450
                   3.00         148.12        0.0450
                   6.00         148.07        0.0450
                   9.00         147.63        0.0450
                  12.00         147.56        0.0450
                  15.00         147.55        0.0450
                  18.00         147.46        0.0450
                  21.00         147.41        0.0450
                  24.00         147.36        0.0450
                  27.00         147.38        0.0450
                  30.00         147.22        0.0450
                  33.00         147.00        0.0450
                  36.00         146.34        0.0450
                  39.00         145.57        0.0350      Main Channel
                  42.00         145.39        0.0350      Main Channel
                  45.00         145.66        0.0350      Main Channel
                  48.00         146.68        0.0450
                  51.00         147.50        0.0450
                  55.00         148.22        0.0450
                  60.00         148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   145.48    .145E+03        0.0          0.25      83.65
        0.18   145.57    .581E+03        0.2          0.40      52.70
        0.35   145.74    .189E+04        1.1          0.73      29.09
        0.52   145.91    .348E+04        2.7          0.99      21.52
        0.68   146.07    .532E+04        5.0          1.19      17.84
        0.85   146.24    .740E+04        7.9          1.36      15.60
        1.02   146.41    .973E+04       11.5          1.51      14.07
        1.19   146.58    .123E+05       15.9          1.64      12.94
        1.35   146.74    .152E+05       21.2          1.78      11.93
```

```
       1.52   146.91    .183E+05      27.8          1.94      10.99
       1.69   147.08    .218E+05      35.0          2.05      10.39
       1.86   147.25    .259E+05      43.0          2.12      10.03
       2.02   147.41    .309E+05      50.6          2.09      10.18
       2.19   147.58    .383E+05      61.5          2.05      10.37
       2.36   147.75    .474E+05      77.1          2.07      10.25
       2.52   147.91    .571E+05      95.6          2.14       9.95
       2.69   148.08    .672E+05     116.0          2.20       9.65
       2.86   148.25    .783E+05     138.1          2.25       9.45
       3.03   148.42    .904E+05     163.4          2.31       9.22

                                          <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 70012)  219.97     3.68    7.25  38.28      0.59      1.07
   OUTFLOW: ID= 1 ( 60040)  219.97     3.52    7.58  38.28      0.58      1.05


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94        19.34
     Dep. Storage     (mm)=       2.00         6.30
     Average Slope     (%)=       3.30         3.30
     Length            (m)=     590.36        68.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      82.92        77.36
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       6.09 (ii)   15.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.19         0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=       5.57         2.24          7.162 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      60.92        33.80          47.09
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.54           0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40050):    52.28   7.162     6.00    47.09
     + ID2= 2 ( 60040):   219.97   3.517     7.58    38.28
       ================================================
       ID = 3 ( 50040):   272.25   7.326     6.00    39.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        146.35        0.0450
                  16.00        145.17        0.0450
                  18.00        144.62        0.0450
                  20.00        143.50        0.0450
                  26.00        141.63        0.0350      Main Channel
                  30.00        142.17        0.0350      Main Channel
                  34.00        144.28        0.0450
                  38.00        145.27        0.0450
                  50.00        146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25   141.88    .129E+03       0.2         0.54      12.17
        0.50   142.13    .516E+03       1.1         0.86       7.67
        0.74   142.38    .111E+04       3.4         1.21       5.42
        0.99   142.63    .184E+04       7.0         1.50       4.37
        1.24   142.87    .269E+04      11.9         1.75       3.76
        1.49   143.12    .366E+04      18.2         1.96       3.36
        1.74   143.37    .476E+04      25.9         2.15       3.06
        1.98   143.62    .597E+04      35.3         2.33       2.82
        2.23   143.87    .729E+04      46.5         2.52       2.61
        2.48   144.11    .869E+04      59.3         2.69       2.44
        2.73   144.36    .102E+05      74.3         2.88       2.28
        2.97   144.61    .118E+05      92.4         3.09       2.13
        3.22   144.86    .136E+05     111.6         3.24       2.03
        3.47   145.11    .156E+05     133.1         3.37       1.95
        3.72   145.35    .178E+05     152.6         3.38       1.94
        3.97   145.60    .206E+05     175.6         3.37       1.95
        4.21   145.85    .239E+05     204.3         3.37       1.95
        4.46   146.10    .279E+05     238.6         3.38       1.95
        4.71   146.35    .324E+05     279.0         3.40       1.93

                                          <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  272.25     7.33    6.00  39.97      1.01      1.52
   OUTFLOW: ID= 1 ( 60050)  272.25     6.69    6.00  39.97      0.96      1.47


--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        142.52        0.0450
                   2.00        142.41        0.0450
                   4.00        142.26        0.0450
                   6.00        142.08        0.0450
                   8.00        141.85        0.0450
                  10.00        141.61        0.0450
                  12.00        141.38        0.0450
                  14.00        141.11        0.0450
                  16.00        140.93        0.0450
                  18.00        140.83        0.0450
                  20.00        140.73        0.0350      Main Channel
                  22.00        140.55        0.0350      Main Channel
                  24.00        140.49        0.0350      Main Channel
                  26.00        140.65        0.0350      Main Channel
                  28.00        141.04        0.0450
                  30.00        141.72        0.0450
                  32.00        142.19        0.0450
                  40.00        142.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   140.57    .466E+02       0.0         0.23      24.59
        0.15   140.65    .155E+03       0.2         0.38      14.98
        0.23   140.73    .305E+03       0.5         0.51      11.12
        0.34   140.84    .598E+03       1.2         0.68       8.29
        0.45   140.95    .995E+03       2.3         0.80       7.09
        0.56   141.06    .147E+04       3.9         0.91       6.22
        0.68   141.17    .201E+04       6.1         1.04       5.45
        0.79   141.28    .259E+04       8.8         1.16       4.89
        0.90   141.39    .321E+04      12.0         1.27       4.47
        1.01   141.50    .389E+04      15.6         1.36       4.16
        1.12   141.61    .461E+04      19.7         1.45       3.90
        1.23   141.72    .537E+04      24.3         1.54       3.69
        1.34   141.84    .619E+04      29.4         1.61       3.52
        1.45   141.95    .707E+04      35.0         1.68       3.37
        1.56   142.06    .799E+04      41.1         1.75       3.24
        1.67   142.17    .898E+04      47.8         1.81       3.13
        1.79   142.28    .101E+05      54.6         1.85       3.07
        1.90   142.39    .113E+05      62.1         1.87       3.03
        2.01   142.50    .127E+05      70.3         1.88       3.01

                                          <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  272.25     6.69    6.00  39.97      0.70      1.06
   OUTFLOW: ID= 1 ( 60060)  272.25     6.24    6.08  39.97      0.68      1.04


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94         1.90
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       2.60         2.60
     Length            (m)=     137.56        98.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=      82.92        43.86
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       2.73 (ii)   20.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.29         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.14          0.250 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=      60.92        30.57          38.54
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.49           0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40060):     2.84    0.250     6.00    38.54
     + ID2= 2 ( 60060):   272.25    6.243     6.08    39.97
       ================================================
       ID = 3 ( 50070):   275.09    6.394     6.08    39.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30        13.55
     Dep. Storage     (mm)=       2.00         5.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     515.42        72.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      82.92        71.10
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       7.25 (ii)   20.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.17         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       4.54         1.30          5.317 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=      60.92        33.61          48.36
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.53           0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40080):    39.85    5.317     6.00    48.36
     + ID2= 2 ( 50070):   275.09    6.394     6.08    39.96
       ================================================
       ID = 3 ( 50080):   314.94   10.942     6.00    41.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        141.24        0.0450
                  40.00        140.58        0.0450
                  50.00        140.57        0.0450
                  60.00        140.36        0.0450
                  70.00        140.19        0.0450
                  80.00        140.15        0.0450
                  90.00        139.70        0.0450
                 100.00        139.54        0.0350      Main Channel
                 110.00        139.97        0.0450
                 120.00        140.53        0.0450
                 130.00        140.63        0.0450
                 140.00        140.72        0.0450
                 150.00        140.87        0.0450
                 190.00        141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   139.63    .150E+03       0.1         0.18      43.53
        0.17   139.71    .598E+03       0.4         0.30      27.01
        0.26   139.80    .126E+04       1.1         0.42      19.24
        0.34   139.88    .209E+04       2.2         0.52      15.58
        0.43   139.97    .307E+04       3.8         0.60      13.36
        0.51   140.05    .420E+04       6.1         0.70      11.45
        0.60   140.14    .548E+04       9.0         0.79      10.19
        0.68   140.22    .714E+04      11.3         0.76      10.55
        0.77   140.31    .919E+04      15.7         0.82       9.77
        0.85   140.39    .115E+05      21.0         0.88       9.11
        0.94   140.48    .141E+05      27.4         0.94       8.54
        1.02   140.56    .169E+05      34.6         0.99       8.12
        1.11   140.65    .205E+05      41.1         0.97       8.32
        1.19   140.74    .248E+05      51.5         1.00       8.02
        1.28   140.82    .296E+05      64.0         1.04       7.70
        1.36   140.91    .348E+05      78.0         1.08       7.44
        1.45   140.99    .407E+05      93.6         1.11       7.24
        1.53   141.08    .472E+05     111.7         1.14       7.05
        1.62   141.16    .545E+05     132.2         1.17       6.87

                                          <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94    10.94    6.00  41.02      0.67      0.77
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    OUTFLOW: ID= 1 ( 60080)  314.94     9.02    6.17  41.02      0.60      0.79

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.99         3.46
      Dep. Storage     (mm)=       2.00         9.68
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     172.19        99.00
      Mannings n           =      0.015        0.370

      Max.Eff.Inten.(mm/hr)=      82.92        28.93
                    over (min)        5.00        30.00
      Storage Coeff.  (min)=       3.20 (ii)   27.11 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.27         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.14         0.16          0.214 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      60.92        24.04         29.12
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.38          0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40090):     4.45   0.214     6.00    29.12
      + ID2= 2 ( 60080):   314.94   9.022     6.17    41.02
        ==========================================================
        ID = 3 ( 50090):   319.39   9.172     6.17    40.85

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         138.71        0.0450
                  4.00         136.97        0.0450
                 28.00         135.94        0.0450
                 32.00         135.79        0.0350      Main Channel
                 36.00         135.23        0.0350      Main Channel
                 40.00         135.71    0.0350 /0.0450  Main Channel
                 54.00         136.96        0.0450
                 80.00         138.63        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.16   135.39    .631E+02        0.1         0.44      12.42
         0.31   135.55    .253E+03        0.5         0.69       7.83
         0.47   135.71    .568E+03        1.6         0.91       5.97
         0.65   135.89    .114E+04        4.2         1.20       4.52
         0.84   136.07    .209E+04        8.7         1.35       4.02
         1.02   136.25    .342E+04       15.4         1.47       3.70
         1.20   136.44    .511E+04       24.8         1.58       3.44
         1.38   136.62    .718E+04       37.2         1.69       3.21
         1.57   136.80    .962E+04       53.1         1.79       3.02
         1.75   136.98    .124E+05       72.7         1.90       2.85
         1.93   137.17    .155E+05       97.8         2.05       2.64
         2.11   137.35    .188E+05      127.1         2.20       2.47
         2.30   137.53    .223E+05      160.4         2.34       2.31
         2.48   137.71    .259E+05      197.8         2.48       2.19
         2.66   137.90    .298E+05      239.5         2.61       2.07
         2.85   138.08    .339E+05      285.4         2.74       1.98
         3.03   138.26    .381E+05      335.6         2.86       1.89
         3.21   138.44    .426E+05      390.3         2.98       1.82
         3.39   138.63    .472E+05      449.4         3.10       1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  319.39     9.17    6.17  40.85      0.85      1.36
   OUTFLOW: ID= 1 ( 60100)  319.39     8.90    6.25  40.85      0.84      1.35


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      12.46        14.44
      Dep. Storage     (mm)=       2.00         6.20
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     423.45       125.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=      82.92        36.81
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       6.45 (ii)   31.29 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.18         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.46         0.78          2.789 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      60.92        30.93         43.65
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.49          0.69

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40100):    26.90   2.789     6.00    43.65
      + ID2= 2 ( 60100):   319.39   8.898     6.25    40.85
        ==========================================================
        ID = 3 ( 50110):   346.28  10.215     6.17    41.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

      Unit Hyd Qpeak  (cms)=   3.961

      PEAK FLOW       (cms)=   2.061 (i)
      TIME TO PEAK    (hrs)=   6.333

      RUNOFF VOLUME    (mm)=  26.288
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.418

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

      Unit Hyd Qpeak  (cms)=   4.875

      PEAK FLOW       (cms)=   2.869 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  28.255
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.449

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   2.061     6.33    26.29
      + ID2= 2 ( 40130):    63.82   2.869     6.42    28.26
        ==========================================================
        ID = 3 ( 50130):   108.42   4.900     6.33    27.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         155.27        0.0450
                  2.00         155.23        0.0450
                  4.00         155.21        0.0450
                  6.00         155.08        0.0450
                  8.00         154.94        0.0450
                 10.00         154.68        0.0450
                 12.00         154.21        0.0450
                 14.00         153.90        0.0450
                 16.00         153.41        0.0350      Main Channel
                 18.00         153.58        0.0350      Main Channel
                 20.00         153.72    0.0350 /0.0450  Main Channel
                 22.00         153.77        0.0450
                 24.00         153.77        0.0450
                 26.00         153.82        0.0450
                 28.00         153.79        0.0450
                 30.00         153.87        0.0450
                 32.00         153.99        0.0450
                 34.00         154.44        0.0450
                 36.00         154.86        0.0450
                 40.00         155.37        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.10   153.50    .107E+03        0.0         0.27      87.23
         0.20   153.60    .429E+03        0.1         0.42      55.65
         0.29   153.70    .991E+03        0.4         0.55      42.98
         0.39   153.80    .201E+04        0.9         0.66      35.52
         0.49   153.90    .408E+04        2.1         0.71      33.15
         0.59   153.99    .651E+04        3.7         0.81      29.01
         0.69   154.09    .916E+04        6.1         0.93      25.22
         0.79   154.19    .120E+05        8.9         1.05      22.39
         0.88   154.29    .149E+05       12.3         1.16      20.20
         0.98   154.39    .179E+05       16.2         1.27      18.49
         1.08   154.49    .211E+05       20.5         1.37      17.13
         1.18   154.58    .244E+05       25.4         1.47      16.02
         1.28   154.68    .278E+05       30.7         1.56      15.10
         1.37   154.78    .314E+05       36.4         1.63      14.38
         1.47   154.88    .351E+05       42.5         1.71      13.77
         1.57   154.98    .391E+05       48.9         1.76      13.33
         1.67   155.07    .433E+05       55.6         1.81      12.98
         1.77   155.17    .478E+05       63.0         1.86      12.65
         1.86   155.27    .528E+05       69.8         1.86      12.62

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42     4.90    6.33  27.45      0.64      0.87
   OUTFLOW: ID= 1 ( 60130)  108.42     3.65    6.75  27.44      0.58      0.80


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      46.69        19.07
      Dep. Storage     (mm)=       2.00         6.30
      Average Slope     (%)=       1.30         1.30
      Length            (m)=     662.12        66.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        65.64
                    over (min)       10.00        25.00
      Storage Coeff.  (min)=       8.62 (ii)   22.65 (ii)
      Unit Hyd. Tpeak (min)=       10.00        25.00
      Unit Hyd. peak  (cms)=       0.12         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       7.61         1.61          8.560 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      60.92        31.19         49.33
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.50          0.78

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76   8.560     6.00    49.33
      + ID2= 2 ( 60130):   108.42   3.646     6.75    27.44
        ==========================================================
        ID = 3 ( 50180):   174.18   9.215     6.00    35.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.55         3.33
      Dep. Storage     (mm)=       2.00         6.90
      Average Slope     (%)=       1.00         1.00
      Length            (m)=     304.26        66.00
      Mannings n           =      0.015        0.310

      Max.Eff.Inten.(mm/hr)=      82.92        40.99
                    over (min)        5.00        25.00
```

```
      Storage Coeff.  (min)=       5.85 (ii)   24.92 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.20         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.22         0.20          2.332 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      60.92        28.39         52.14
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.45          0.83

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.74         8.05
      Dep. Storage     (mm)=       2.00         8.12
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     303.13       131.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      82.92        24.55
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       4.49 (ii)   33.71 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.23         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.20         0.32          1.323 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.50          6.00
      RUNOFF VOLUME    (mm)=      60.92        24.57         38.62
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.39          0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  77.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        155.90        0.0450
                    1.00        154.69        0.0450
                    2.00        154.30        0.0450
                    3.00        154.00    0.0450 /0.0350  Main Channel
                    4.00        153.74        0.0350      Main Channel
                    5.00        153.51        0.0350      Main Channel
                    6.00        153.46        0.0350      Main Channel
                    7.00        153.77        0.0350      Main Channel
                    8.00        154.10    0.0350 /0.0450  Main Channel
                    9.00        154.50        0.0450
                   10.00        154.84        0.0450
                   11.00        155.13        0.0450
                   12.00        155.26        0.0450
                   13.00        155.32        0.0450
                   14.00        155.42        0.0450
                   15.00        155.52        0.0450
                   16.00        155.62        0.0450
                   17.00        155.69        0.0450
                   18.00        155.76        0.0450
                   20.00        155.88        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.11   153.57    .445E+02       0.0         0.32      21.18
        0.22   153.68    .135E+03       0.2         0.51      13.45
        0.33   153.79    .262E+03       0.4         0.66      10.46
        0.43   153.89    .423E+03       0.8         0.79       8.73
        0.54   154.00    .616E+03       1.3         0.90       7.61
        0.68   154.14    .900E+03       2.4         1.09       6.30
        0.81   154.27    .123E+04       3.8         1.27       5.40
        0.95   154.41    .160E+04       5.5         1.42       4.83
        1.08   154.54    .201E+04       7.6         1.55       4.43
        1.22   154.68    .246E+04       9.9         1.67       4.12
        1.35   154.81    .294E+04      12.7         1.78       3.86
        1.48   154.94    .345E+04      15.8         1.88       3.65
        1.62   155.08    .400E+04      19.2         1.97       3.48
        1.75   155.21    .458E+04      22.9         2.05       3.34
        1.89   155.35    .524E+04      26.8         2.11       3.26
        2.02   155.48    .599E+04      31.4         2.16       3.18
        2.16   155.62    .682E+04      36.5         2.20       3.12
        2.29   155.75    .774E+04      41.9         2.23       3.08
        2.43   155.89    .878E+04      48.0         2.25       3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)     (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     1.32    6.00  38.62       0.54      0.89
   OUTFLOW: ID= 1 ( 60190)   13.78     1.10    6.00  38.62       0.49      0.84


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      17.41         5.53
      Dep. Storage     (mm)=       2.00         6.75
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     391.08       150.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        30.57
                    over (min)        5.00        30.00
      Storage Coeff.  (min)=       4.89 (ii)   29.15 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.22         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       3.83         0.26          3.956 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      60.92        26.70         52.28
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.42          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40180):    13.89    2.332     6.00    52.14
      + ID2= 2 ( 40200):    22.94    3.956     6.00    52.28
        ================================================
        ID = 3 ( 50200):    36.83    6.289     6.00    52.23
```

```
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50200):    36.83    6.289     6.00    52.23
      + ID2= 2 ( 60190):    13.78    1.105     6.00    38.62
        ================================================
        ID = 1 ( 50200):    50.61    7.394     6.00    48.52

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.01         1.06
      Dep. Storage     (mm)=       2.00         6.27
      Average Slope     (%)=       0.90         0.90
      Length            (m)=     201.21       118.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        23.83
                    over (min)        5.00        40.00
      Storage Coeff.  (min)=       4.71 (ii)   38.01 (ii)
      Unit Hyd. Tpeak (min)=       5.00        40.00
      Unit Hyd. peak  (cms)=       0.22         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.11         0.04          1.128 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.50          6.00
      RUNOFF VOLUME    (mm)=      60.92        26.61         54.66
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.42          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40210):     6.07    1.128     6.00    54.66
      + ID2= 2 ( 50200):    50.61    7.394     6.00    48.52
        ================================================
        ID = 3 ( 50210):    56.68    8.522     6.00    49.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        152.62        0.0450
                    7.00        152.39        0.0450
                    8.00        152.02        0.0450
                    9.00        151.48        0.0450
                   10.00        151.01        0.0450
                   11.00        150.56    0.0450 /0.0350  Main Channel
                   12.00        150.38        0.0350      Main Channel
                   13.00        150.40        0.0350      Main Channel
                   14.00        150.36        0.0350      Main Channel
                   15.00        150.60    0.0350 /0.0450  Main Channel
                   16.00        150.99        0.0450
                   17.00        151.50        0.0450
                   18.00        151.91        0.0450
                   19.00        152.65        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.10   150.46    .580E+02       0.1         0.30      17.06
        0.20   150.56    .160E+03       0.3         0.48      10.57
        0.32   150.68    .314E+03       0.7         0.70       7.18
        0.44   150.80    .489E+03       1.4         0.89       5.71
        0.56   150.92    .686E+03       2.3         1.03       4.89
        0.69   151.04    .904E+03       3.5         1.16       4.35
        0.81   151.16    .114E+04       4.8         1.28       3.95
        0.93   151.29    .140E+04       6.4         1.38       3.66
        1.05   151.41    .167E+04       8.1         1.48       3.42
        1.17   151.53    .196E+04      10.1         1.57       3.22
        1.29   151.65    .227E+04      12.3         1.65       3.06
        1.41   151.77    .260E+04      14.8         1.73       2.93
        1.54   151.89    .295E+04      17.5         1.80       2.81
        1.66   152.01    .331E+04      20.4         1.87       2.70
        1.78   152.13    .369E+04      23.6         1.94       2.61
        1.90   152.26    .409E+04      27.0         2.00       2.52
        2.02   152.38    .451E+04      30.7         2.06       2.45
        2.14   152.50    .500E+04      33.4         2.03       2.49
        2.26   152.62    .563E+04      37.3         2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)     (m)      (m/s)
   INFLOW : ID= 2 ( 50210)   56.68     8.52    6.00  49.18       1.07      1.49
   OUTFLOW: ID= 1 ( 60210)   56.68     8.13    6.00  49.18       1.05      1.48


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.91         2.40
      Dep. Storage     (mm)=       2.00         6.17
      Average Slope     (%)=       0.60         0.60
      Length            (m)=     274.66        79.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        27.41
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       6.41 (ii)   34.36 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.18         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.90         0.10          1.940 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      60.92        27.21         53.42
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.43          0.85

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40220):    11.32    1.940     6.00    53.42
      + ID2= 2 ( 60210):    56.68    8.135     6.00    49.18
        ================================================
        ID = 3 ( 50120):    68.00   10.075     6.00    49.88
```

```
35497>
35498>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
35499> ------------------------------------------------------------------------------
35500>
35501> --------------------
35502> | ADD HYD  ( 50140)|
35503> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
35504> --------------------          (ha)    (cms)    (hrs)     (mm)
35505>         ID1= 1 ( 50120):    68.00  10.075     6.00    49.88
35506>       + ID2= 2 ( 50180):   174.18   9.215     6.00    35.70
35507>         ====================================================
35508>         ID = 3 ( 50140):   242.18  19.290     6.00    39.68
35509>
35510>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
35511> ------------------------------------------------------------------------------
35512> --------------------
35513> | ROUTE CHN( 60140)|
35514> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
35515> --------------------
35516>                <------ DATA FOR SECTION (   1.1) ------>
35517>                Distance      Elevation       Manning
35518>                    0.00         152.29        0.0450
35519>                    2.00         152.20        0.0450
35520>                    4.00         152.17        0.0450
35521>                    6.00         152.15        0.0450
35522>                    8.00         151.78        0.0450
35523>                   10.00         151.28        0.0450
35524>                   12.00         150.79        0.0450
35525>                   14.00         150.20    0.0450 /0.0350  Main Channel
35526>                   16.00         149.82        0.0350      Main Channel
35527>                   18.00         149.51        0.0350      Main Channel
35528>                   20.00         149.24        0.0350      Main Channel
35529>                   22.00         149.48        0.0350      Main Channel
35530>                   24.00         150.00    0.0350 /0.0450  Main Channel
35531>                   26.00         150.52        0.0450
35532>                   28.00         151.14        0.0450
35533>                   30.00         151.68        0.0450
35534>                   32.00         152.11        0.0450
35535>                   34.00         152.20        0.0450
35536>                   35.00         152.27        0.0450
35537>                   38.00         152.30        0.0450
35538>
35539>       <---------------------- TRAVEL TIME TABLE ---------------------->
35540>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
35541>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
35542>         0.15  149.39    .694E+02        0.1         0.32      19.63
35543>         0.31  149.54    .273E+03        0.4         0.53      11.92
35544>         0.46  149.70    .577E+03        1.1         0.72       8.87
35545>         0.61  149.85    .972E+03        2.2         0.87       7.30
35546>         0.76  150.00    .145E+04        3.9         1.01       6.26
35547>         0.93  150.16    .205E+04        6.4         1.18       5.36
35548>         1.09  150.33    .274E+04        9.9         1.37       4.62
35549>         1.25  150.49    .350E+04       14.2         1.54       4.11
35550>         1.42  150.65    .434E+04       19.3         1.69       3.75
35551>         1.58  150.82    .524E+04       25.2         1.83       3.47
35552>         1.74  150.98    .621E+04       31.8         1.95       3.26
35553>         1.91  151.14    .726E+04       39.2         2.06       3.09
35554>         2.07  151.31    .839E+04       47.5         2.16       2.94
35555>         2.23  151.47    .959E+04       56.6         2.25       2.82
35556>         2.40  151.63    .109E+05       66.7         2.34       2.72
35557>         2.56  151.80    .122E+05       77.6         2.41       2.63
35558>         2.72  151.96    .137E+05       89.3         2.48       2.55
35559>         2.89  152.12    .153E+05      102.0         2.55       2.49
35560>         3.05  152.29    .172E+05      111.6         2.47       2.57
35561>
35562>                                    <---- hydrograph ---->   <-pipe / channel->
35563>                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
35564>                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
35565>    INFLOW : ID= 2 ( 50140)  242.18    19.29     6.00   39.68      1.42      1.69
35566>    OUTFLOW: ID= 1 ( 60140)  242.18    17.97     6.08   39.68      1.37      1.65
35567>
35568>
35569>
35570> ------------------------------------------------------------------------------
35571> --------------------
35572> | ROUTE CHN( 60150)|
35573> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
35574> --------------------
35575>                <------ DATA FOR SECTION (   1.1) ------>
35576>                Distance      Elevation       Manning
35577>                    0.00         151.02        0.0450
35578>                    2.00         150.89        0.0450
35579>                    4.00         150.73        0.0450
35580>                    6.00         150.65        0.0450
35581>                    8.00         150.38        0.0450
35582>                   10.00         149.93        0.0450
35583>                   12.00         149.51        0.0450
35584>                   14.00         149.02    0.0450 /0.0350  Main Channel
35585>                   16.00         148.64        0.0350      Main Channel
35586>                   18.00         148.27        0.0350      Main Channel
35587>                   20.00         148.39        0.0350      Main Channel
35588>                   22.00         148.60        0.0350      Main Channel
35589>                   24.00         148.94    0.0350 /0.0450  Main Channel
35590>                   26.00         149.34        0.0450
35591>                   28.00         149.66        0.0450
35592>                   30.00         150.12        0.0450
35593>                   32.00         150.45        0.0450
35594>                   34.00         150.52        0.0450
35595>                   36.00         150.60        0.0450
35596>                   38.00         150.60        0.0450
35597>
35598>       <---------------------- TRAVEL TIME TABLE ---------------------->
35599>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
35600>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
35601>         0.11  148.38    .283E+02        0.0         0.26      13.34
35602>         0.22  148.49    .107E+03        0.2         0.44       7.98
35603>         0.34  148.60    .226E+03        0.6         0.58       6.07
35604>         0.45  148.72    .380E+03        1.3         0.72       4.90
35605>         0.56  148.83    .563E+03        2.2         0.84       4.20
35606>         0.67  148.94    .775E+03        3.5         0.95       3.72
35607>         0.80  149.07    .105E+04        5.5         1.11       3.17
35608>         0.93  149.20    .136E+04        8.2         1.27       2.77
35609>         1.06  149.32    .170E+04       11.3         1.41       2.50
35610>         1.18  149.45    .207E+04       14.9         1.52       2.31
35611>         1.31  149.58    .248E+04       19.1         1.63       2.17
35612>         1.44  149.71    .292E+04       23.8         1.72       2.05
35613>         1.57  149.83    .340E+04       29.1         1.81       1.95
35614>         1.70  149.96    .391E+04       34.9         1.89       1.87
35615>         1.82  150.09    .445E+04       41.4         1.97       1.79
35616>         1.95  150.22    .502E+04       48.4         2.04       1.73
35617>         2.08  150.35    .563E+04       56.0         2.10       1.67
35618>         2.21  150.47    .628E+04       63.9         2.15       1.64
35619>         2.33  150.60    .702E+04       71.1         2.14       1.64
35620>
35621>                                    <---- hydrograph ---->   <-pipe / channel->
35622>                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
35623>                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
35624>    INFLOW : ID= 2 ( 60140)  242.18    17.97     6.08   39.68      1.28      1.60
35625>    OUTFLOW: ID= 1 ( 60150)  242.18    18.16     6.08   39.68      1.29      1.60
35626>
35627>
35628>
35629> ------------------------------------------------------------------------------
35630> --------------------
35631> | CALIB            |
35632> | STANDHYD ( 40150)|   Area    (ha)=   5.37
35633> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
35634> --------------------
35635>                                IMPERVIOUS    PERVIOUS (i)
35636>      Surface Area     (ha)=       3.11         2.26
35637>      Dep. Storage     (mm)=       2.00         6.34
35638>      Average Slope     (%)=       2.30         2.30
35639>      Length            (m)=     189.18        45.00
35640>      Mannings n           =      0.015        0.290
35641>
35642>      Max.Eff.Inten.(mm/hr)=      82.92        51.68
35643>                over (min)        5.00        15.00
35644>      Storage Coeff.  (min)=       3.43 (ii)   13.76 (ii)
35645>      Unit Hyd. Tpeak (min)=       5.00        15.00
35646>      Unit Hyd. peak  (cms)=       0.26         0.08
35647>                                                          *TOTALS*
35648>      PEAK FLOW       (cms)=       0.64         0.20          0.815 (iii)
35649>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
35650>      RUNOFF VOLUME    (mm)=      60.92        29.01          45.64
35651>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
35652>      RUNOFF COEFFICIENT   =       0.97         0.46           0.73
35653>
35654> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
35655>
35656>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
35657>            CN*  =  80.0    Ia = Dep. Storage  (Above)
35658>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
35659>            THAN THE STORAGE COEFFICIENT.
35660>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
35661>
35662> ------------------------------------------------------------------------------
35663>
35664> --------------------
35665> | ADD HYD  ( 50160)|
35666> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
35667> --------------------          (ha)    (cms)    (hrs)     (mm)
35668>         ID1= 1 ( 40150):     5.37    0.815     6.00    45.64
35669>       + ID2= 2 ( 60150):   242.18   18.161     6.08    39.68
35670>         ====================================================
35671>         ID = 3 ( 50160):   247.54   18.581     6.08    39.81
35672>
35673>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
35674> ------------------------------------------------------------------------------
35675> --------------------
35676> | CALIB            |
35677> | STANDHYD ( 40240)|   Area    (ha)=  10.28
35678> |ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
35679> --------------------
35680>                                IMPERVIOUS    PERVIOUS (i)
35681>      Surface Area     (ha)=       8.79         1.50
35682>      Dep. Storage     (mm)=       2.00         5.70
35683>      Average Slope     (%)=       3.40         3.40
35684>      Length            (m)=     261.85        70.00
35685>      Mannings n           =      0.015        0.270
35686>
35687>      Max.Eff.Inten.(mm/hr)=      82.92        47.86
35688>                over (min)        5.00        10.00
35689>      Storage Coeff.  (min)=       3.70 (ii)    8.40 (ii)
35690>      Unit Hyd. Tpeak (min)=       5.00        10.00
35691>      Unit Hyd. peak  (cms)=       0.25         0.12
35692>                                                          *TOTALS*
35693>      PEAK FLOW       (cms)=       1.99         0.15          2.137 (iii)
35694>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
35695>      RUNOFF VOLUME    (mm)=      60.92        27.46          55.86
35696>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
35697>      RUNOFF COEFFICIENT   =       0.97         0.44           0.89
35698>
35699> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
35700>
35701>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
35702>            CN*  =  79.6    Ia = Dep. Storage  (Above)
35703>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
35704>            THAN THE STORAGE COEFFICIENT.
35705>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
35706>
35707> ------------------------------------------------------------------------------
35708> --------------------
35709> | CALIB            |
35710> | STANDHYD ( 40250)|   Area    (ha)=  13.36
35711> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
35712> --------------------
35713>                                IMPERVIOUS    PERVIOUS (i)
35714>      Surface Area     (ha)=       8.61         4.75
35715>      Dep. Storage     (mm)=       2.00         7.14
35716>      Average Slope     (%)=       2.00         2.00
35717>      Length            (m)=     298.43        70.00
35718>      Mannings n           =      0.015        0.320
35719>
35720>      Max.Eff.Inten.(mm/hr)=      82.92        34.32
35721>                over (min)        5.00        25.00
35722>      Storage Coeff.  (min)=       4.70 (ii)   22.26 (ii)
35723>      Unit Hyd. Tpeak (min)=       5.00        25.00
35724>      Unit Hyd. peak  (cms)=       0.22         0.05
35725>                                                          *TOTALS*
35726>      PEAK FLOW       (cms)=       1.88         0.26          2.028 (iii)
35727>      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
35728>      RUNOFF VOLUME    (mm)=      60.92        25.78          47.88
35729>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
35730>      RUNOFF COEFFICIENT   =       0.97         0.41           0.76
35731>
35732> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
35733>
35734>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
35735>            CN*  =  78.7    Ia = Dep. Storage  (Above)
35736>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
35737>            THAN THE STORAGE COEFFICIENT.
35738>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
35739>
35740> ------------------------------------------------------------------------------
35741> --------------------
35742> | ROUTE CHN( 60240)|
35743> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
35744> --------------------
35745>                <------ DATA FOR SECTION (   1.1) ------>
35746>                Distance      Elevation       Manning
35747>                    0.00         155.56        0.0450
35748>                    2.00         155.23        0.0450
35749>                    4.00         154.58        0.0450
35750>                    6.00         153.92        0.0450
35751>                    8.00         153.53        0.0450
35752>                   10.00         152.64        0.0450
35753>                   12.00         152.43    0.0450 /0.0350  Main Channel
35754>                   14.00         152.24        0.0350      Main Channel
35755>                   16.00         152.07        0.0350      Main Channel
35756>                   18.00         152.30    0.0350 /0.0450  Main Channel
35757>                   20.00         152.46        0.0450
35758>                   22.00         155.55        0.0450
35759>
35760>       <---------------------- TRAVEL TIME TABLE ---------------------->
35761>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
35762>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
35763>         0.12  152.18    .895E+02        0.1         0.43      24.33
35764>         0.24  152.30    .356E+03        0.4         0.69      15.20
35765>         0.43  152.49    .118E+04        2.1         1.10       9.55
35766>         0.62  152.68    .234E+04        5.5         1.48       7.09
35767>         0.81  152.88    .361E+04       10.4         1.83       5.76
35768>         1.00  153.07    .494E+04       16.7         2.13       4.94
35769>         1.19  153.26    .634E+04       24.2         2.40       4.38
35770>         1.38  153.45    .781E+04       32.8         2.65       3.97
35771>         1.58  153.64    .936E+04       42.5         2.86       3.67
35772>         1.77  153.83    .110E+05       53.3         3.05       3.45
35773>         1.96  154.02    .128E+05       65.6         3.23       3.26
35774>         2.15  154.21    .147E+05       79.4         3.40       3.09
35775>         2.34  154.40    .167E+05       94.5         3.57       2.95
35776>         2.53  154.60    .188E+05      111.0         3.73       2.82
35777>         2.72  154.79    .209E+05      128.7         3.89       2.71
35778>         2.91  154.98    .231E+05      147.8         4.03       2.61
35779>         3.10  155.17    .255E+05      168.3         4.17       2.52
35780>         3.30  155.36    .279E+05      189.2         4.28       2.46
35781>         3.49  155.55    .305E+05      211.3         4.38       2.40
35782>
35783>                                    <---- hydrograph ---->   <-pipe / channel->
35784>                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
35785>                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
35786>    INFLOW : ID= 2 ( 40250)   13.36     2.03     6.00   47.88      0.42      1.09
35787>    OUTFLOW: ID= 1 ( 60240)   13.36     1.54     6.00   47.87      0.37      0.93
35788>
35789>
35790>
35791> ------------------------------------------------------------------------------
35792>
35793> --------------------
35794> | ADD HYD  ( 50250)|
35795> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
35796> --------------------          (ha)    (cms)    (hrs)     (mm)
35797>         ID1= 1 ( 40240):    10.28    2.137     6.00    55.86
35798>       + ID2= 2 ( 50160):   247.54   18.581     6.08    39.81
35799>         ====================================================
35800>         ID = 3 ( 50250):   257.83   19.443     6.08    40.45
35801>
35802>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
---------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50250):   257.83  19.443     6.08    40.45
      + ID2= 2 ( 60240):    13.36   1.540     6.00    47.87
        ==================================================
        ID = 1 ( 50250):   271.19  20.919     6.08    40.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        149.47        0.0450
                    3.00        149.39        0.0450
                    6.00        149.18        0.0450
                    9.00        148.85        0.0450
                   12.00        148.60        0.0450
                   15.00        148.16        0.0450
                   18.00        147.81        0.0450
                   21.00        147.50        0.0450
                   24.00        147.26        0.0350      Main Channel
                   27.00        146.88        0.0350      Main Channel
                   30.00        146.72        0.0350      Main Channel
                   33.00        147.27    0.0350 /0.0450  Main Channel
                   36.00        147.60        0.0450
                   39.00        147.71        0.0450
                   42.00        148.10        0.0450
                   45.00        148.90        0.0450
                   48.00        149.05        0.0450
                   51.00        149.12        0.0450
                   54.00        149.43        0.0450
                   57.00        149.67        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.14  146.85    .156E+03        0.1         0.30      40.24
         0.27  146.99    .583E+03        0.4         0.51      23.51
         0.41  147.13    .119E+04        1.1         0.68      17.78
         0.54  147.26    .198E+04        2.2         0.82      14.76
         0.69  147.41    .309E+04        4.3         1.02      11.88
         0.84  147.56    .455E+04        7.2         1.15      10.50
         0.98  147.70    .637E+04       10.9         1.24       9.73
         1.13  147.85    .862E+04       15.8         1.32       9.12
         1.28  148.00    .111E+05       21.7         1.41       8.55
         1.42  148.14    .139E+05       28.7         1.50       8.06
         1.57  148.29    .169E+05       37.1         1.59       7.58
         1.72  148.44    .200E+05       46.5         1.68       7.16
         1.87  148.58    .233E+05       57.0         1.77       6.80
         2.01  148.73    .268E+05       68.3         1.85       6.53
         2.16  148.88    .305E+05       80.9         1.92       6.28
         2.31  149.02    .345E+05       93.2         1.95       6.17
         2.45  149.17    .391E+05      106.6         1.97       6.11
         2.60  149.32    .441E+05      123.2         2.02       5.97
         2.75  149.47    .495E+05      139.7         2.04       5.91

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    20.92    6.08  40.82      1.26      1.40
   OUTFLOW: ID= 1 ( 60250)  271.19    17.92    6.17  40.82      1.18      1.35


---------------------
| CALIB             |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
---------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.93        12.52
     Dep. Storage     (mm)=       2.00         6.70
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     435.49        46.00
     Mannings n           =      0.015        0.300

     Max.Eff.Inten.(mm/hr)=      82.92        61.17
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       6.70 (ii)   18.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.62         1.12         3.391 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      60.92        30.11        43.36
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.48         0.69

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| ADD HYD  ( 50260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40260):    28.45   3.391     6.00    43.36
      + ID2= 2 ( 60250):   271.19  17.916     6.17    40.82
        ==================================================
        ID = 3 ( 50260):   299.64  19.921     6.17    41.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        143.17        0.0450
                    4.00        143.15        0.0450
                    8.00        143.14        0.0450
                   12.00        142.95        0.0450
                   16.00        142.87        0.0450
                   20.00        142.67        0.0450
                   24.00        142.24        0.0450
                   28.00        141.84        0.0450
                   32.00        141.61        0.0450
                   36.00        141.32        0.0450
                   40.00        140.98        0.0450
                   44.00        140.88        0.0450
                   48.00        139.95        0.0350      Main Channel
                   52.00        140.09        0.0350      Main Channel
                   56.00        141.11        0.0450
                   60.00        141.43        0.0450
                   76.00        143.21        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.17  140.12    .479E+03        0.2         0.48      36.89
         0.34  140.29    .147E+04        1.2         0.86      20.63
         0.51  140.46    .272E+04        2.9         1.12      15.78
         0.68  140.63    .421E+04        5.3         1.33      13.28
         0.85  140.80    .596E+04        8.5         1.51      11.69
         1.02  140.97    .812E+04       12.0         1.56      11.29
         1.19  141.14    .111E+05       17.6         1.68      10.52
         1.36  141.31    .147E+05       25.4         1.83       9.67
         1.53  141.48    .191E+05       34.9         1.93       9.14
         1.70  141.65    .242E+05       46.4         2.03       8.71
         1.87  141.81    .301E+05       59.9         2.11       8.38
         2.04  141.98    .367E+05       76.6         2.21       7.99
         2.21  142.15    .439E+05       95.9         2.31       7.63
         2.37  142.32    .517E+05      117.9         2.42       7.30
         2.54  142.49    .600E+05      142.7         2.52       7.01
         2.71  142.66    .689E+05      170.3         2.62       6.74
         2.88  142.83    .785E+05      198.2         2.68       6.60
         3.05  143.00    .892E+05      225.9         2.68       6.58
         3.22  143.17    .101E+06      250.7         2.63       6.73

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50260)  299.64    19.92    6.17  41.06      1.24      1.72
   OUTFLOW: ID= 1 ( 60260)  299.64    17.32    6.25  41.06      1.18      1.67


---------------------
| CALIB             |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
---------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12         6.71
     Dep. Storage     (mm)=       2.00         8.03
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     256.01        73.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      82.92        36.17
                   over (min)        5.00        30.00
     Storage Coeff.  (min)=       5.13 (ii)   26.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.21         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.48         0.39         0.672 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33         6.00
     RUNOFF VOLUME    (mm)=      60.92        28.62        35.73
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.45         0.57

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40270):     9.83   0.672     6.00    35.73
      + ID2= 2 ( 60260):   299.64  17.320     6.25    41.06
        ==================================================
        ID = 3 ( 50270):   309.47  17.778     6.25    40.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| CALIB             |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
---------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.16        11.14
     Dep. Storage     (mm)=       2.00         7.27
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     456.83        53.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=      82.92        61.75
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       7.25 (ii)   21.05 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.17         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.41         0.91         3.939 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25         6.00
     RUNOFF VOLUME    (mm)=      60.92        29.03        45.51
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.46         0.72

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40280):    31.30   3.939     6.00    45.51
      + ID2= 2 ( 50270):   309.47  17.778     6.25    40.89
        ==================================================
        ID = 3 ( 50280):   340.77  19.562     6.25    41.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        139.35        0.0450
                    3.00        139.19        0.0450
                    6.00        138.46        0.0450
                   27.00        137.71        0.0450
                   30.00        137.44        0.0350      Main Channel
                   33.00        137.26        0.0350      Main Channel
                   36.00        137.51        0.0350      Main Channel
                   39.00        137.64    0.0350 /0.0450  Main Channel
                   42.00        137.71        0.0450
                   57.00        139.35        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.09  137.35    .361E+02        0.0         0.30      17.09
         0.18  137.44    .145E+03        0.2         0.48      10.76
         0.30  137.55    .369E+03        0.8         0.68       7.57
         0.41  137.67    .717E+03        1.9         0.82       6.28
         0.52  137.78    .124E+04        3.9         0.97       5.27
         0.63  137.89    .192E+04        6.8         1.10       4.67
         0.74  138.00    .273E+04       10.7         1.20       4.25
         0.86  138.11    .369E+04       15.7         1.30       3.93
         0.97  138.23    .480E+04       21.8         1.39       3.67
         1.08  138.34    .605E+04       29.1         1.48       3.46
         1.19  138.45    .745E+04       37.8         1.56       3.28
         1.31  138.56    .895E+04       48.6         1.67       3.07
         1.42  138.68    .105E+05       60.8         1.78       2.88
         1.53  138.79    .121E+05       74.4         1.89       2.71
         1.64  138.90    .138E+05       89.3         1.99       2.57
         1.76  139.01    .155E+05      105.5         2.10       2.44
         1.87  139.13    .172E+05      123.0         2.19       2.33
         1.98  139.24    .190E+05      140.8         2.27       2.25
         2.09  139.35    .209E+05      159.0         2.33       2.20

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    19.56    6.25  41.31      0.93      1.36
   OUTFLOW: ID= 1 ( 60280)  340.77    19.29    6.33  41.31      0.92      1.35
```

```
36109>
36110>
36111> ------------------------------------------------------------------------------
36112> --------------------
36113> | CALIB            |
36114> | STANDHYD ( 40300)|   Area     (ha)=  11.53
36115> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
36116> --------------------
36117>                              IMPERVIOUS    PERVIOUS (i)
36118>      Surface Area     (ha)=       6.71         4.81
36119>      Dep. Storage     (mm)=       2.00         7.99
36120>      Average Slope     (%)=       1.60         1.60
36121>      Length            (m)=     277.19        63.00
36122>      Mannings n            =      0.015        0.340
36123>
36124>      Max.Eff.Inten.(mm/hr)=      82.92        57.43
36125>                   over (min)        5.00        20.00
36126>      Storage Coeff.  (min)=       4.80 (ii)   19.68 (ii)
36127>      Unit Hyd. Tpeak (min)=       5.00        20.00
36128>      Unit Hyd. peak  (cms)=       0.22         0.06
36129>                                                          *TOTALS*
36130>      PEAK FLOW       (cms)=       1.16         0.39          1.424 (iii)
36131>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
36132>      RUNOFF VOLUME    (mm)=      60.92        27.75          42.66
36133>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
36134>      RUNOFF COEFFICIENT   =       0.97         0.44           0.68
36135>
36136> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
36137>
36138>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
36139>           CN*  =  76.3    Ia = Dep. Storage  (Above)
36140>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
36141>           THAN THE STORAGE COEFFICIENT.
36142>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36143>
36144> ------------------------------------------------------------------------------
36145>
36146> --------------------
36147> | ADD HYD  ( 50300)|
36148> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36149> --------------------         (ha)    (cms)    (hrs)     (mm)
36150>        ID1= 1 ( 40300):    11.53   1.424     6.00    42.66
36151>      + ID2= 2 ( 60280):   340.77  19.285     6.33    41.31
36152>        ================================================
36153>        ID = 3 ( 50300):   352.30  19.789     6.33    41.36
36154>
36155>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36156> ------------------------------------------------------------------------------
36157> --------------------
36158> | ROUTE CHN( 60300)|
36159> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
36160> --------------------
36161>               <------ DATA FOR SECTION (   1.1) ------>
36162>               Distance      Elevation       Manning
36163>                   0.00         137.26        0.0450
36164>                   4.00         136.94        0.0450
36165>                   8.00         136.82        0.0450
36166>                  12.00         136.69        0.0450
36167>                  16.00         136.55        0.0450
36168>                  36.00         135.52        0.0350      Main Channel
36169>                  64.00         136.21        0.0450
36170>                  75.00         136.49        0.0450
36171>                  84.00         137.21        0.0450
36172>
36173>       <---------------------- TRAVEL TIME TABLE ----------------------->
36174>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
36175>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
36176>         0.09  135.61    .491E+02        0.1         0.26      12.99
36177>         0.18  135.70    .196E+03        0.4         0.42       8.18
36178>         0.27  135.79    .442E+03        1.2         0.55       6.24
36179>         0.36  135.88    .785E+03        2.5         0.66       5.15
36180>         0.45  135.97    .123E+04        4.6         0.77       4.44
36181>         0.53  136.06    .177E+04        7.5         0.87       3.93
36182>         0.62  136.15    .240E+04       11.3         0.96       3.55
36183>         0.71  136.24    .314E+04       16.4         1.07       3.19
36184>         0.80  136.32    .397E+04       23.3         1.20       2.84
36185>         0.89  136.41    .490E+04       31.4         1.32       2.60
36186>         0.98  136.50    .592E+04       40.8         1.42       2.41
36187>         1.07  136.59    .701E+04       51.5         1.51       2.27
36188>         1.16  136.68    .816E+04       63.4         1.59       2.14
36189>         1.25  136.77    .938E+04       76.6         1.67       2.04
36190>         1.34  136.86    .107E+05       91.2         1.75       1.95
36191>         1.42  136.95    .120E+05      107.3         1.83       1.87
36192>         1.51  137.04    .135E+05      125.8         1.91       1.78
36193>         1.60  137.13    .149E+05      145.6         2.00       1.71
36194>         1.69  137.22    .164E+05      166.8         2.08       1.64
36195>
36196>                                    <---- hydrograph ---->   <-pipe / channel->
36197>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
36198>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
36199>    INFLOW : ID= 2 ( 50300)  352.30    19.79     6.33  41.36      0.76      1.13
36200>    OUTFLOW: ID= 1 ( 60300)  352.30    19.74     6.33  41.36      0.76      1.13
36201>
36202>
36203>
36204> ------------------------------------------------------------------------------
36205> --------------------
36206> | CALIB            |
36207> | STANDHYD ( 40290)|   Area     (ha)=   9.17
36208> |ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
36209> --------------------
36210>                              IMPERVIOUS    PERVIOUS (i)
36211>      Surface Area     (ha)=       2.77         6.39
36212>      Dep. Storage     (mm)=       2.00         8.38
36213>      Average Slope     (%)=       3.20         3.20
36214>      Length            (m)=     247.21        43.00
36215>      Mannings n            =      0.015        0.350
36216>
36217>      Max.Eff.Inten.(mm/hr)=      82.92        46.56
36218>                   over (min)        5.00        15.00
36219>      Storage Coeff.  (min)=       3.64 (ii)   14.28 (ii)
36220>      Unit Hyd. Tpeak (min)=       5.00        15.00
36221>      Unit Hyd. peak  (cms)=       0.25         0.08
36222>                                                          *TOTALS*
36223>      PEAK FLOW       (cms)=       0.49         0.51          0.920 (iii)
36224>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
36225>      RUNOFF VOLUME    (mm)=      60.92        26.81          34.83
36226>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
36227>      RUNOFF COEFFICIENT   =       0.97         0.43           0.55
36228>
36229> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
36230>
36231>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
36232>           CN*  =  79.8    Ia = Dep. Storage  (Above)
36233>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
36234>           THAN THE STORAGE COEFFICIENT.
36235>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36236>
36237> ------------------------------------------------------------------------------
36238>
36239> --------------------
36240> | ADD HYD  ( 50340)|
36241> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36242> --------------------         (ha)    (cms)    (hrs)     (mm)
36243>        ID1= 1 ( 40290):     9.17   0.920     6.00    34.83
36244>      + ID2= 2 ( 60300):   352.30  19.745     6.33    41.36
36245>        ================================================
36246>        ID = 3 ( 50340):   361.46  20.131     6.33    41.19
36247>
36248>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36249> ------------------------------------------------------------------------------
36250>
36251> --------------------
36252> | ADD HYD  ( 50350)|
36253> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36254> --------------------         (ha)    (cms)    (hrs)     (mm)
36255>        ID1= 1 ( 50110):   346.28  10.215     6.17    41.07
36256>      + ID2= 2 ( 50340):   361.46  20.131     6.33    41.19
36257>        ================================================
36258>        ID = 3 ( 50350):   707.75  29.619     6.33    41.13
36259>
36260>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36261> ------------------------------------------------------------------------------
36262> --------------------
36263> | ROUTE CHN( 60350)|
36264> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
36265> --------------------
36266>               <------ DATA FOR SECTION (   1.1) ------>
36267>               Distance      Elevation       Manning
36268>                   0.00         134.05        0.0450
36269>                  24.00         133.67        0.0450
36270>                  30.00         131.85        0.0450
36271>                  36.00         131.42        0.0450
36272>                  42.00         130.48        0.0450
36273>                  48.00         130.42        0.0350      Main Channel
36274>                  54.00         130.42        0.0350      Main Channel
36275>                  60.00         130.62        0.0450
36276>                  66.00         130.77        0.0450
36277>                  72.00         131.03        0.0450
36278>                  78.00         131.43        0.0450
36279>                  84.00         131.38        0.0450
36280>                  90.00         131.33        0.0450
36281>                  96.00         131.98        0.0450
36282>                 102.00         133.31        0.0450
36283>                 120.00         133.95        0.0450
36284>
36285>       <---------------------- TRAVEL TIME TABLE ----------------------->
36286>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
36287>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
36288>         0.00  130.42    .133E+02        0.0         0.03     768.63
36289>         0.19  130.61    .383E+04        1.6         0.61      40.07
36290>         0.37  130.79    .994E+04        6.6         0.97      25.18
36291>         0.56  130.98    .179E+05       15.1         1.23      19.81
36292>         0.75  131.16    .272E+05       27.2         1.46      16.72
36293>         0.93  131.35    .377E+05       42.2         1.64      14.88
36294>         1.12  131.54    .521E+05       60.9         1.71      14.26
36295>         1.30  131.72    .683E+05       87.2         1.86      13.07
36296>         1.49  131.91    .857E+05      119.1         2.03      11.99
36297>         1.68  132.09    .104E+06      157.8         2.22      10.96
36298>         1.86  132.28    .122E+06      201.6         2.41      10.11
36299>         2.05  132.47    .141E+06      250.1         2.59       9.41
36300>         2.23  132.65    .160E+06      303.1         2.76       8.82
36301>         2.42  132.84    .180E+06      360.6         2.93       8.32
36302>         2.61  133.02    .200E+06      422.5         3.08       7.90
36303>         2.79  133.21    .221E+06      488.7         3.24       7.53
36304>         2.98  133.40    .242E+06      552.2         3.34       7.29
36305>         3.16  133.58    .264E+06      613.6         3.40       7.17
36306>         3.35  133.77    .288E+06      658.8         3.34       7.30
36307>
36308>                                    <---- hydrograph ---->   <-pipe / channel->
36309>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
36310>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
36311>    INFLOW : ID= 2 ( 50350)  707.75    29.62     6.33  41.13      0.78      1.48
36312>    OUTFLOW: ID= 1 ( 60350)  707.75    26.14     6.50  41.13      0.73      1.43
36313>
36314>
36315>
36316> ------------------------------------------------------------------------------
36317> --------------------
36318> | CALIB            |
36319> | NASHYD   (******)|   Area     (ha)=   1.03   Curve Number   (CN)= 85.0
36320> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
36321> --------------------   U.H. Tp(hrs)=   0.24
36322>
36323>      Unit Hyd Qpeak  (cms)=   0.164
36324>
36325>      PEAK FLOW       (cms)=   0.091 (i)
36326>      TIME TO PEAK    (hrs)=   6.083
36327>      RUNOFF VOLUME    (mm)=  33.043
36328>      TOTAL RAINFALL   (mm)=  62.921
36329>      RUNOFF COEFFICIENT   =   0.525
36330>
36331>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36332>
36333> ------------------------------------------------------------------------------
36334> --------------------
36335> | CALIB            |
36336> | NASHYD   (******)|   Area     (ha)=   2.22   Curve Number   (CN)= 85.0
36337> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
36338> --------------------   U.H. Tp(hrs)=   0.27
36339>
36340>      Unit Hyd Qpeak  (cms)=   0.314
36341>
36342>      PEAK FLOW       (cms)=   0.179 (i)
36343>      TIME TO PEAK    (hrs)=   6.167
36344>      RUNOFF VOLUME    (mm)=  33.054
36345>      TOTAL RAINFALL   (mm)=  62.921
36346>      RUNOFF COEFFICIENT   =   0.525
36347>
36348>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36349>
36350> ------------------------------------------------------------------------------
36351> --------------------
36352> | CALIB            |
36353> | NASHYD   (******)|   Area     (ha)=   2.67   Curve Number   (CN)= 85.0
36354> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
36355> --------------------   U.H. Tp(hrs)=   0.30
36356>
36357>      Unit Hyd Qpeak  (cms)=   0.340
36358>
36359>      PEAK FLOW       (cms)=   0.203 (i)
36360>      TIME TO PEAK    (hrs)=   6.167
36361>      RUNOFF VOLUME    (mm)=  33.061
36362>      TOTAL RAINFALL   (mm)=  62.921
36363>      RUNOFF COEFFICIENT   =   0.525
36364>
36365>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36366>
36367> ------------------------------------------------------------------------------
36368>
36369> --------------------
36370> | ADD HYD  (******)|
36371> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36372> --------------------         (ha)    (cms)    (hrs)     (mm)
36373>        ID1= 1 (******):     2.67   0.203     6.17    33.06
36374>      + ID2= 2 (******):     2.22   0.179     6.17    33.05
36375>        ================================================
36376>        ID = 3 (******):     4.89   0.383     6.17    33.06
36377>
36378>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36379> ------------------------------------------------------------------------------
36380> --------------------
36381> | DIVERTHYD(******)|
36382> | IN= 1   # OUT= 5 |
36383> --------------------
36384>      Outflow / Inflow  Relationships
36385>
36386>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
36387>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
36388>         0.00     0.00     0.00     0.00     0.00     0.00
36389>         1.00     1.00     0.00     0.00     0.00     2.00
36390>         2.00     2.00     0.00     0.00     0.00     4.00
36391>        10.00    10.00     0.00     0.00     0.00    20.00
36392>
36393>                                AREA     QPEAK     TPEAK    R.V.
36394>                                (ha)     (cms)     (hrs)    (mm)
36395>      TOTAL HYD.(ID= 1):        4.89      0.38      6.17   33.06
36396>      ================================================
36397>      ID= 2  (   2)    :        2.44      0.19      6.17   33.06
36398>      ID= 3  (   2)    :        2.44      0.19      6.17   33.06
36399>      ID= 4  (   2)    :        0.00      0.00      0.00    0.00
36400>      ID= 5  (   2)    :        0.00      0.00      0.00    0.00
36401>      ID= 6  (   2)    :        0.00      0.00      0.00    0.00
36402> ------------------------------------------------------------------------------
36403>
36404> --------------------
36405> | ADD HYD  (******)|
36406> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36407> --------------------         (ha)    (cms)    (hrs)     (mm)
36408>        ID1= 1 (******):     1.03   0.091     6.08    33.04
36409>      + ID2= 2 (******):     2.44   0.191     6.17    33.06
36410>        ================================================
36411>        ID = 3 (******):     3.48   0.278     6.17    33.05
36412>
36413>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36414> ------------------------------------------------------------------------------
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---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   4.15   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.480

     PEAK FLOW       (cms)=   0.295 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.065
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.031 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.825
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.522

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.15   0.295     6.17    33.07
      + ID2= 2 (******):     0.26   0.031     6.00    32.83
        ====================================================
        ID = 3 (******):     4.41   0.314     6.17    33.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.41   0.314     6.17    33.05
      + ID2= 2 (******):     3.48   0.278     6.17    33.05
        ====================================================
        ID = 1 (******):     7.89   0.592     6.17    33.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.78   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.199

     PEAK FLOW       (cms)=   0.091 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.883
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.523

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   2.14   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.292

     PEAK FLOW       (cms)=   0.170 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.057
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.122

     PEAK FLOW       (cms)=   0.064 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.022
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   1.47   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.170

     PEAK FLOW       (cms)=   0.105 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.065
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.67   0.064     6.08    33.02
      + ID2= 2 (******):     2.14   0.170     6.17    33.06
        ====================================================
        ID = 3 (******):     2.81   0.231     6.08    33.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     2.81   0.231     6.08    33.05
      + ID2= 2 (******):     0.78   0.091     6.00    32.88
        ====================================================
        ID = 1 (******):     3.59   0.313     6.08    33.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     3.59   0.313     6.08    33.01
      + ID2= 2 (******):     1.47   0.105     6.17    33.06
        ====================================================
        ID = 3 (******):     5.06   0.410     6.08    33.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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---------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     7.89   0.592     6.17    33.05
      + ID2= 2 (******):     5.06   0.410     6.08    33.03
        ====================================================
        ID = 3 ( 50360):    12.95   0.988     6.08    33.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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---------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50360):    12.95   0.988     6.08    33.04
      + ID2= 2 ( 60350):   707.75  26.143     6.50    41.13
        ====================================================
        ID = 1 ( 50360):   720.69  26.731     6.50    40.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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---------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.30        0.0450
                    6.00         127.39        0.0450
                   12.00         127.46        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04        0.0450
                   72.00         123.15        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  122.98    .246E+03        0.4         0.31      10.02
        0.33  123.21    .251E+04       11.8         0.86       3.57
        0.56  123.45    .538E+04       39.9         1.37       2.25
        0.80  123.68    .842E+04       81.1         1.78       1.73
        1.04  123.92    .116E+05      134.5         2.13       1.44
        1.27  124.16    .150E+05      200.0         2.46       1.25
        1.51  124.39    .185E+05      278.3         2.78       1.11
        1.74  124.63    .220E+05      367.4         3.08       1.00
        1.98  124.86    .257E+05      466.7         3.35       0.92
        2.22  125.10    .294E+05      576.1         3.61       0.85
        2.45  125.34    .332E+05      695.4         3.86       0.80
        2.69  125.57    .371E+05      824.8         4.10       0.75
        2.92  125.81    .410E+05      963.8         4.33       0.71
        3.16  126.04    .451E+05     1112.3         4.55       0.68
        3.39  126.28    .492E+05     1270.1         4.76       0.65
        3.63  126.51    .534E+05     1437.3         4.97       0.62
        3.87  126.75    .576E+05     1613.7         5.16       0.60
        4.10  126.99    .620E+05     1791.1         5.33       0.58
        4.34  127.22    .665E+05     1970.4         5.47       0.56

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50360)  720.69    26.73    6.50  40.98      0.45      1.07
   OUTFLOW: ID= 1 ( 60390)  720.69    26.77    6.50  40.98      0.45      1.07


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---------------------
| CALIB             |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   1.867 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  29.809
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.474

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40390):    20.55   1.867     6.08    29.81
      + ID2= 2 ( 60390):   720.69  26.766     6.50    40.98
        ====================================================
        ID = 3 ( 50390):   741.24  27.415     6.50    40.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
---------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83          6.10
     Dep. Storage     (mm)=       2.00          6.08
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     345.74         42.00
     Mannings n             =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      82.92         78.64
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.59 (ii)    14.93 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.20          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.06          0.77        2.732 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=      60.92         33.89        48.03
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =       0.97          0.54         0.76


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        127.70        0.0450
                  18.00        126.87        0.0450
                  24.00        125.30        0.0450
                  30.00        123.90        0.0450
                  36.00        123.14        0.0450
                  42.00        123.07        0.0450
                  48.00        122.88        0.0450
                  54.00        122.90        0.0450
                  60.00        122.95        0.0450
                  66.00        123.04    0.0450 /0.0350  Main Channel
                  72.00        122.86        0.0350      Main Channel
                  78.00        122.98        0.0450
                  84.00        122.97        0.0450
                  90.00        122.96        0.0450
                  96.00        122.92        0.0450
                 102.00        123.50        0.0450
                 108.00        124.18        0.0450
                 120.00        127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.12   122.98    .275E+03       0.7         0.35       6.78
       0.36   123.21    .218E+04      14.7         0.95       2.47
       0.59   123.45    .437E+04      44.6         1.44       1.63
       0.83   123.68    .670E+04      87.2         1.84       1.28
       1.06   123.92    .916E+04     141.6         2.19       1.08
       1.30   124.16    .117E+05     208.1         2.51       0.94
       1.54   124.39    .144E+05     287.0         2.82       0.84
       1.77   124.63    .171E+05     376.7         3.11       0.76
       2.01   124.86    .199E+05     476.5         3.38       0.70
       2.24   125.10    .228E+05     586.1         3.64       0.65
       2.48   125.33    .257E+05     705.6         3.88       0.61
       2.71   125.57    .287E+05     835.1         4.12       0.57
       2.95   125.80    .317E+05     974.0         4.35       0.54
       3.19   126.04    .348E+05    1122.3         4.56       0.52
       3.42   126.28    .379E+05    1279.8         4.77       0.49
       3.66   126.51    .411E+05    1446.6         4.97       0.47
       3.89   126.75    .444E+05    1622.6         5.17       0.46
       4.13   126.98    .477E+05    1786.6         5.29       0.45
       4.36   127.22    .513E+05    1942.9         5.36       0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     2.73    6.00  48.03      0.16      0.38
   OUTFLOW: ID= 1 ( 60370)   17.93     2.23    6.08  48.03      0.15      0.37


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---------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   741.24  27.415     6.50    40.67
      + ID2= 2 ( 60370):    17.93   2.231     6.08    48.03
        ================================================
        ID = 3 ( 50400):   759.17  28.208     6.50    40.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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---------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        125.01        0.0450
                  20.00        123.70        0.0450
                  25.00        123.04        0.0450
                  30.00        120.84        0.0450
                  35.00        119.81    0.0450 /0.0350  Main Channel
                  40.00        119.74        0.0350      Main Channel
                  65.00        120.12        0.0450
                  90.00        120.58        0.0450
                 100.00        125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.07   119.81    .209E+03       0.1         0.27      34.81
       0.35   120.09    .326E+04       4.7         0.83      11.50
       0.62   120.36    .916E+04      21.3         1.34       7.16
       0.90   120.63    .176E+05      51.5         1.68       5.69
       1.17   120.91    .270E+05      96.6         2.05       4.67
       1.44   121.18    .367E+05     153.8         2.41       3.98
       1.72   121.46    .466E+05     222.1         2.74       3.50
       1.99   121.73    .567E+05     300.7         3.05       3.14
       2.26   122.00    .669E+05     389.1         3.34       2.87
       2.54   122.28    .774E+05     487.1         3.62       2.65
       2.81   122.55    .880E+05     594.2         3.88       2.47
       3.09   122.82    .988E+05     710.4         4.13       2.32
       3.36   123.10    .110E+06     834.4         4.36       2.20
       3.63   123.37    .121E+06     964.4         4.57       2.10
       3.91   123.65    .133E+06    1104.4         4.76       2.01
       4.18   123.92    .145E+06    1250.0         4.93       1.94
       4.45   124.19    .159E+06    1406.7         5.09       1.88
       4.73   124.47    .172E+06    1575.5         5.25       1.82
       5.00   124.74    .187E+06    1756.1         5.39       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  759.17    28.21    6.50  40.85      0.68      1.40
   OUTFLOW: ID= 1 ( 60400)  759.17    27.62    6.58  40.85      0.68      1.40


--------------------------------------------------------------------------------
---------------------
| CALIB            |
| STANDHYD ( 40410)|   Area     (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
---------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      82.92        15.44
                   over (min)       5.00       115.00
     Storage Coeff.  (min)=       4.80 (ii)  112.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00       115.00
     Unit Hyd. peak  (cms)=       0.22         0.01
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.44         0.09          0.453 (iii)
     TIME TO PEAK    (hrs)=       6.00         7.83          6.00
     RUNOFF VOLUME    (mm)=      60.92        24.02         33.26
     TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
     RUNOFF COEFFICIENT   =       0.97         0.38          0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40410):     7.92   0.453     6.00    33.26
      + ID2= 2 ( 60400):   759.17  27.623     6.58    40.85
        ================================================
        ID = 3 ( 50410):   767.09  27.697     6.58    40.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.175 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.037
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.053 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.011
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.095 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.030
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   6.75   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.37

     Unit Hyd Qpeak  (cms)=   0.697

     PEAK FLOW       (cms)=   0.443 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  33.069
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.75   0.443     6.25    33.07
      + ID2= 2 (******):     1.01   0.095     6.08    33.03
        ================================================
        ID = 3 (******):     7.76   0.521     6.17    33.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.180 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.051
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.169

     PEAK FLOW       (cms)=   0.098 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.057
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.24   0.098     6.17    33.06
      + ID2= 2 (******):     2.16   0.180     6.08    33.05
        ================================================
        ID = 3 (******):     3.40   0.276     6.08    33.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     3.40   0.276     6.08    33.05
      + ID2= 2 (******):     7.76   0.521     6.17    33.06
        ================================================
        ID = 1 (******):    11.16   0.796     6.17    33.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.68   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.30
```

```
      Unit Hyd Qpeak  (cms)=   0.341

      PEAK FLOW       (cms)=   0.204 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  33.061
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

      Unit Hyd Qpeak  (cms)=   0.136

      PEAK FLOW       (cms)=   0.070 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  33.011
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.129

      PEAK FLOW       (cms)=   0.063 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  32.979
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.524

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.063     6.08    32.98
      + ID2= 2 (******):     2.44   0.191     6.17    33.06
        ================================================
        ID = 3 (******):     3.06   0.249     6.08    33.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.95   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.158

      PEAK FLOW       (cms)=   0.087 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  33.037
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

      Unit Hyd Qpeak  (cms)=   0.196

      PEAK FLOW       (cms)=   0.110 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  33.048
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.28   0.110     6.08    33.05
      + ID2= 2 (******):     0.95   0.087     6.08    33.04
        ================================================
        ID = 3 (******):     2.23   0.196     6.08    33.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.23   0.196     6.08    33.04
      + ID2= 2 (******):     0.71   0.070     6.08    33.01
        ================================================
        ID = 1 (******):     2.94   0.266     6.08    33.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.94   0.266     6.08    33.04
      + ID2= 2 (******):     1.92   0.175     6.08    33.04
        ================================================
        ID = 3 (******):     4.86   0.441     6.08    33.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.86   0.441     6.08    33.04
      + ID2= 2 (******):     0.54   0.053     6.08    33.01
        ================================================
        ID = 1 (******):     5.40   0.495     6.08    33.03

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.40   0.495     6.08    33.03
      + ID2= 2 (******):     2.68   0.204     6.17    33.06
        ================================================
        ID = 3 (******):     8.08   0.690     6.08    33.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     8.08   0.690     6.08    33.04
      + ID2= 2 (******):     3.06   0.249     6.08    33.04
        ================================================
        ID = 1 (******):    11.13   0.939     6.08    33.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   0.939     6.08    33.04
      + ID2= 2 (******):    11.16   0.796     6.17    33.06
        ================================================
        ID = 3 (******):    22.30   1.700     6.17    33.05

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.197

      PEAK FLOW       (cms)=   0.110 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  33.043
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.174

      PEAK FLOW       (cms)=   0.096 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  33.037
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  18.31   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.457

      PEAK FLOW       (cms)=   0.997 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  33.072
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.526

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.05   0.096     6.08    33.04
      + ID2= 2 (******):    18.31   0.997     6.33    33.07
        ================================================
        ID = 3 (******):    19.36   1.058     6.33    33.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    19.36   1.058     6.33    33.07
      + ID2= 2 (******):     1.24   0.110     6.08    33.04
        ================================================
        ID = 1 (******):    20.60   1.132     6.33    33.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    22.30   1.700     6.17    33.05
      + ID2= 2 (******):    20.60   1.132     6.33    33.07
        ================================================
        ID = 3 (******):    42.90   2.773     6.17    33.06

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area     (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       20.95         46.62
      Dep. Storage     (mm)=        2.00          7.70
      Average Slope     (%)=        1.90          1.90
      Length            (m)=      671.17         89.00
      Mannings n             =     0.015         0.240

      Max.Eff.Inten.(mm/hr)=       82.92         39.52
                  over (min)       10.00         25.00
      Storage Coeff.  (min)=        7.76 (ii)    24.14 (ii)
      Unit Hyd. Tpeak (min)=       10.00         25.00
      Unit Hyd. peak  (cms)=        0.13          0.05
                                                            *TOTALS*
      PEAK FLOW       (cms)=        3.31          2.77          5.013 (iii)
      TIME TO PEAK    (hrs)=        6.00          6.25           6.08
      RUNOFF VOLUME    (mm)=       60.92         28.18          36.36
      TOTAL RAINFALL   (mm)=       62.92         62.92          62.92
      RUNOFF COEFFICIENT   =        0.97          0.45           0.58

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):     67.57   5.013     6.08    36.36
      + ID2= 2 (******):     42.90   2.773     6.17    33.06
        ================================================
        ID = 3 (******):    110.47   7.654     6.08    35.08

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ADD HYD  ( 50420)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):   767.09  27.697     6.58    40.77
      + ID2= 2 (******):   110.47   7.654     6.08    35.08
        ================================================
        ID = 3 ( 50420):   877.56  32.144     6.50    40.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        121.79        0.0450
                  12.00        116.08        0.0450
                  40.00        115.59    0.0450 /0.0350  Main Channel
                  44.00        114.89        0.0350      Main Channel
                  48.00        114.52        0.0350      Main Channel
                  52.00        115.72    0.0350 /0.0450  Main Channel
                  56.00        115.93        0.0450
                  60.00        117.24        0.0450
                  64.00        119.04        0.0450
                  68.00        120.69        0.0450
                  72.00        121.01        0.0450
                  74.00        121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36  114.88   .645E+03        0.7         0.83       14.38
        0.71  115.23   .236E+04        4.6         1.41        8.47
        1.07  115.59   .489E+04       12.6         1.84        6.48
        1.44  115.96   .112E+05       30.9         1.97        6.04
        1.80  116.33   .227E+05       69.1         2.17        5.49
        2.17  116.70   .351E+05      125.6         2.56        4.65
        2.54  117.06   .479E+05      197.5         2.95        4.04
        2.91  117.43   .612E+05      283.9         3.32        3.59
        3.28  117.80   .749E+05      384.1         3.66        3.25
        3.65  118.17   .891E+05      497.4         3.99        2.99
        4.02  118.54   .104E+06      623.5         4.30        2.77
        4.39  118.91   .119E+06      762.2         4.59        2.60
        4.76  119.28   .134E+06      913.1         4.87        2.45
        5.13  119.65   .150E+06     1076.2         5.13        2.32
        5.49  120.02   .166E+06     1251.7         5.38        2.21
        5.86  120.39   .183E+06     1439.5         5.62        2.12
        6.23  120.75   .200E+06     1634.3         5.84        2.04
        6.60  121.12   .219E+06     1831.3         5.99        1.99
        6.97  121.49   .238E+06     2058.5         6.20        1.92

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420)  877.56    32.14    6.50  40.05      1.45      1.98
   OUTFLOW: ID= 1 ( 60420)  877.56    31.68    6.58  40.05      1.44      1.98
--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.41         11.03
     Dep. Storage     (mm)=       2.00          7.80
     Average Slope     (%)=       3.50          3.50
     Length            (m)=     465.00        102.00
     Mannings n           =      0.015         0.320

     Max.Eff.Inten.(mm/hr)=      82.92         35.43
                   over (min)       5.00         25.00
     Storage Coeff.  (min)=       5.18 (ii)    23.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.21          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.61          0.59        4.941 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25         6.00
     RUNOFF VOLUME    (mm)=      60.92         26.12        48.39
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =       0.97          0.42         0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   4.941     6.00    48.39
      + ID2= 2 ( 60420):   877.56  31.680     6.58    40.05
        ================================================
        ID = 3 ( 50430):   909.99  32.528     6.58    40.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        116.29        0.0450
                  20.00        114.05        0.0450
                  25.00        110.83        0.0450
                  30.00        109.36        0.0450
                  35.00        108.23    0.0450 /0.0350  Main Channel
                  40.00        107.52        0.0350      Main Channel
                  45.00        108.00    0.0350 /0.0450  Main Channel
                  50.00        107.84        0.0450
                  55.00        108.21        0.0450
                  60.00        108.95        0.0450
                  65.00        109.35        0.0450
                  70.00        109.41        0.0450
                  75.00        109.48        0.0450
                  80.00        109.77        0.0450
                  85.00        112.20        0.0450
                  90.00        115.48        0.0450
                 100.00        116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24  107.76   .285E+03        0.4         0.74       12.74
        0.48  108.00   .146E+04        2.6         1.01        9.32
        0.97  108.49   .695E+04       23.3         1.90        4.97
        1.46  108.97   .141E+05       64.5         2.60        3.63
        1.94  109.46   .233E+05      116.9         2.84        3.33
        2.43  109.95   .371E+05      214.6         3.28        2.88
        2.92  110.44   .519E+05      350.2         3.83        2.47
        3.41  110.92   .675E+05      515.9         4.34        2.18
        3.89  111.41   .836E+05      711.3         4.82        1.96
        4.38  111.90   .100E+06      933.4         5.28        1.79
        4.87  112.39   .117E+06     1182.4         5.71        1.65
        5.35  112.87   .135E+06     1458.0         6.13        1.54
        5.84  113.36   .153E+06     1758.3         6.52        1.45
        6.33  113.85   .171E+06     2082.9         6.90        1.37
        6.82  114.34   .190E+06     2410.6         7.19        1.31
        7.30  114.82   .210E+06     2758.9         7.43        1.27
        7.79  115.31   .232E+06     3143.1         7.68        1.23
        8.28  115.80   .255E+06     3473.3         7.71        1.23
        8.77  116.29   .282E+06     3812.4         7.67        1.23

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  909.99    32.53    6.58  40.35      1.08      2.02
   OUTFLOW: ID= 1 ( 60430)  909.99    32.36    6.67  40.35      1.07      2.02
--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70         19.42
     Dep. Storage     (mm)=       2.00          6.60
     Average Slope     (%)=       2.50          2.50
     Length            (m)=     617.06         45.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=      82.92         36.09
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       6.79 (ii)    18.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.18          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.93          1.01        8.603 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17         6.00
     RUNOFF VOLUME    (mm)=      60.92         22.65        47.53
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =       0.97          0.36         0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40440):    57.11   8.603     6.00    47.53
      + ID2= 2 ( 60430):   909.99  32.357     6.67    40.35
        ================================================
        ID = 3 ( 50440):   967.10  33.582     6.58    40.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        104.01        0.0450
                  10.00        103.90        0.0450
                  20.00        103.74        0.0450
                  30.00        103.66        0.0450
                  40.00        103.60        0.0450
                  50.00        102.52        0.0450
                  60.00        101.16        0.0450
                  70.00        100.60        0.0450
                  80.00        100.17        0.0450
                  90.00         99.85        0.0450
                 100.00         97.89        0.0350      Main Channel
                 110.00         97.62        0.0350      Main Channel
                 120.00         99.12        0.0450
                 130.00         99.16        0.0450
                 140.00         99.36        0.0450
                 150.00         99.66        0.0450
                 160.00         99.68        0.0450
                 180.00         99.76        0.0450
                 190.00        104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27   97.89   .102E+04        1.2         0.77       13.74
        0.60   98.21   .381E+04        9.4         1.56        6.74
        0.92   98.53   .738E+04       24.3         2.08        5.05
        1.24   98.86   .117E+05       46.2         2.50        4.22
        1.56   99.18   .171E+05       76.6         2.84        3.71
        1.89   99.50   .264E+05      124.5         2.98        3.53
        2.21   99.82   .403E+05      189.1         2.96        3.56
        2.53  100.15   .597E+05      286.1         3.03        3.48
        2.85  100.47   .809E+05      417.7         3.26        3.23
        3.17  100.79   .104E+06      580.2         3.53        2.98
        3.50  101.11   .128E+06      771.7         3.81        2.77
        3.82  101.44   .153E+06      996.3         4.10        2.57
        4.14  101.76   .179E+06     1248.4         4.40        2.40
        4.46  102.08   .206E+06     1526.4         4.68        2.25
        4.79  102.40   .233E+06     1829.8         4.96        2.13
        5.11  102.73   .261E+06     2156.4         5.22        2.02
        5.43  103.05   .290E+06     2507.0         5.47        1.93
        5.75  103.37   .319E+06     2882.7         5.71        1.85
        6.08  103.69   .350E+06     3194.7         5.77        1.83

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  967.10    33.58    6.58  40.77      1.05      2.24
   OUTFLOW: ID= 1 ( 60440)  967.10    33.50    6.67  40.77      1.05      2.24
--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37         17.02
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       0.80          0.80
     Length            (m)=     450.16        150.00
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=      82.92         18.82
                   over (min)      10.00         55.00
     Storage Coeff.  (min)=       7.91 (ii)    52.59 (ii)
     Unit Hyd. Tpeak (min)=      10.00         55.00
     Unit Hyd. peak  (cms)=       0.13          0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.43          0.49        2.551 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.83         6.00
     RUNOFF VOLUME    (mm)=      60.92         24.75        39.58
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =       0.97          0.39         0.63

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40450):    30.40   2.551     6.00    39.58
      + ID2= 2 ( 60440):   967.10  33.501     6.67    40.77
        ================================================
        ID = 3 ( 50450):   997.50  34.261     6.67    40.74
```

```
                                                                                
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         97.16        0.0450
                   3.00         96.00        0.0450
                   6.00         95.32        0.0450
                   9.00         94.64        0.0450
                  12.00         94.43        0.0450
                  15.00         94.29        0.0450
                  18.00         94.10        0.0350      Main Channel
                  21.00         94.02        0.0350      Main Channel
                  24.00         93.70        0.0350      Main Channel
                  27.00         94.22    0.0350 /0.0450  Main Channel
                  30.00         94.90        0.0450
                  32.00         95.30        0.0450
                  34.00         95.78        0.0450
                  36.00         96.25        0.0450
                  38.00         96.60        0.0450
                  48.00         97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.83    .942E+02        0.1         0.39      30.45
        0.27   93.96    .377E+03        0.3         0.62      19.18
        0.40   94.09    .911E+03        0.9         0.69      17.28
        0.59   94.29    .230E+04        3.4         1.06      11.15
        0.78   94.48    .428E+04        7.9         1.32       8.98
        0.97   94.67    .679E+04       14.6         1.53       7.74
        1.16   94.86    .963E+04       23.7         1.75       6.77
        1.35   95.05    .127E+05       34.9         1.96       6.07
        1.54   95.24    .160E+05       48.1         2.14       5.54
        1.73   95.43    .196E+05       63.6         2.31       5.13
        1.92   95.62    .233E+05       81.2         2.48       4.79
        2.11   95.81    .273E+05      101.0         2.63       4.51
        2.30   96.00    .315E+05      123.0         2.78       4.27
        2.49   96.19    .360E+05      147.8         2.93       4.06
        2.68   96.38    .406E+05      174.6         3.07       3.87
        2.87   96.57    .454E+05      203.7         3.20       3.71
        3.06   96.76    .505E+05      232.7         3.28       3.62
        3.25   96.95    .562E+05      264.9         3.36       3.54
        3.44   97.14    .624E+05      300.8         3.43       3.46

                                     <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50450)  997.50    34.26    6.67  40.74      1.34      1.94
    OUTFLOW: ID= 1 ( 60450)  997.50    34.06    6.75  40.74      1.33      1.93


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36          7.04
     Dep. Storage     (mm)=       2.00          6.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     386.43         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      82.92         69.38
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.19 (ii)    13.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.63          0.81          3.319 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      60.92         27.86         45.33
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.44          0.72

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40    3.319     6.00    45.33
     + ID2= 2 ( 60450):   997.50   34.056     6.75    40.74
       ========================================================
       ID = 3 ( 50460):  1019.90   34.433     6.75    40.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         91.61        0.0450
                   3.00         91.57        0.0450
                   6.00         91.15        0.0450
                   9.00         90.70        0.0450
                  12.00         89.72        0.0450
                  15.00         88.86        0.0450
                  18.00         88.38    0.0450 /0.0350  Main Channel
                  21.00         87.96        0.0350      Main Channel
                  24.00         88.18    0.0350 /0.0450  Main Channel
                  26.00         88.19        0.0450
                  28.00         88.30        0.0450
                  30.00         90.32        0.0450
                  32.00         90.49        0.0450
                  34.00         90.80        0.0450
                  36.00         90.85        0.0450
                  38.00         90.97        0.0450
                  40.00         91.15        0.0450
                  42.00         91.29        0.0450
                  44.00         91.40        0.0450
                  46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   88.07    .589E+02        0.0         0.34      23.89
        0.21   88.18    .235E+03        0.3         0.54      15.05
        0.41   88.38    .106E+04        1.8         0.85       9.64
        0.61   88.57    .211E+04        5.3         1.22       6.69
        0.81   88.77    .330E+04       10.2         1.51       5.40
        1.01   88.97    .462E+04       16.6         1.76       4.63
        1.21   89.17    .603E+04       24.5         1.99       4.10
        1.41   89.37    .753E+04       33.8         2.19       3.72
        1.61   89.57    .912E+04       44.4         2.38       3.42
        1.81   89.77    .108E+05       56.4         2.56       3.19
        2.00   89.97    .125E+05       69.9         2.72       2.99
        2.20   90.17    .144E+05       84.7         2.88       2.83
        2.40   90.37    .163E+05       99.8         3.00       2.72
        2.60   90.56    .184E+05      114.7         3.04       2.68
        2.80   90.76    .208E+05      132.8         3.13       2.61
        3.00   90.96    .235E+05      148.4         3.09       2.64
        3.20   91.16    .266E+05      170.7         3.13       2.60
        3.40   91.36    .302E+05      194.9         3.16       2.58
        3.60   91.56    .342E+05      223.5         3.20       2.55

                                     <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50460) 1019.90    34.43    6.75  40.84      1.42      2.20
    OUTFLOW: ID= 1 ( 60460) 1019.90    34.37    6.75  40.84      1.42      2.20


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53         30.66
     Dep. Storage     (mm)=       2.00          5.90
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     775.42         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      82.92         65.50
                   over (min)       10.00         20.00
     Storage Coeff.  (min)=       9.27 (ii)    19.23 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.12          0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       9.04          2.70         10.907 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      60.92         29.18         46.32
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.46          0.74

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40470):    90.19   10.907     6.00    46.32
     + ID2= 2 ( 60460):  1019.90   34.369     6.75    40.84
       ========================================================
       ID = 3 ( 50470):  1110.09   36.499     6.75    41.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         89.19        0.0450
                   2.00         88.89        0.0450
                   4.00         88.54        0.0450
                   6.00         88.31        0.0450
                   8.00         88.14        0.0450
                  10.00         88.02        0.0450
                  12.00         87.99        0.0450
                  14.00         87.90        0.0450
                  16.00         87.84        0.0450
                  19.00         87.55        0.0450
                  22.00         86.85        0.0450
                  25.00         86.23        0.0350      Main Channel
                  28.00         86.23        0.0350      Main Channel
                  31.00         86.60        0.0450
                  34.00         87.49        0.0450
                  37.00         88.15        0.0450
                  41.00         88.21        0.0450
                  45.00         88.29        0.0450
                  48.00         88.36        0.0450
                  50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

                                     <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50470) 1110.09    36.50    6.75  41.28      1.76      1.72
    OUTFLOW: ID= 1 ( 60470) 1110.09    36.21    6.83  41.28      1.75      1.72


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82         13.61
     Dep. Storage     (mm)=       2.00          5.80
     Average Slope     (%)=       1.90          1.90
     Length            (m)=     613.35         40.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=      82.92         99.18
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       7.35 (ii)    14.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.17          0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       7.00          2.21          8.918 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      60.92         35.64         50.55
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.57          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40480):    56.43    8.918     6.00    50.55
     + ID2= 2 ( 60470):  1110.09   36.213     6.83    41.28
       ========================================================
       ID = 3 ( 50480):  1166.52   37.327     6.75    41.73
```

```
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00          86.90        0.0450
                   2.00          86.76        0.0450
                   4.00          85.96        0.0450
                   6.00          85.44        0.0450
                   8.00          84.83        0.0450
                  10.00          84.50        0.0450
                  12.00          84.15        0.0450
                  14.00          83.85        0.0350      Main Channel
                  16.00          83.86        0.0350      Main Channel
                  18.00          83.99    0.0350 /0.0450  Main Channel
                  20.00          84.27        0.0450
                  22.00          84.55        0.0450
                  24.00          84.88        0.0450
                  26.00          85.37        0.0450
                  27.00          85.68        0.0450
                  28.00          85.91        0.0450
                  29.00          86.08        0.0450
                  30.00          86.21        0.0450
                  31.00          86.29        0.0450
                  34.00          86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03        0.3         0.48      10.34
        0.32   84.17    .460E+03        1.2         0.77       6.41
        0.48   84.33    .855E+03        2.8         0.98       5.07
        0.64   84.48    .135E+04        5.2         1.14       4.35
        0.80   84.64    .193E+04        8.3         1.28       3.88
        0.95   84.80    .261E+04       12.3         1.40       3.53
        1.11   84.96    .337E+04       17.4         1.53       3.23
        1.27   85.12    .419E+04       23.5         1.66       2.97
        1.43   85.28    .506E+04       30.5         1.79       2.77
        1.59   85.44    .599E+04       38.5         1.90       2.60
        1.75   85.60    .697E+04       47.3         2.01       2.46
        1.91   85.76    .801E+04       57.1         2.12       2.34
        2.07   85.92    .911E+04       67.8         2.21       2.24
        2.23   86.07    .103E+05       79.5         2.30       2.15
        2.39   86.23    .115E+05       91.9         2.37       2.09
        2.54   86.39    .128E+05      105.7         2.45       2.02
        2.70   86.55    .142E+05      121.2         2.53       1.95
        2.86   86.71    .156E+05      138.0         2.62       1.89
        3.02   86.87    .171E+05      153.0         2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1166.52    37.33    6.75  41.73      1.57      1.89
   OUTFLOW: ID= 1 ( 60480) 1166.52    37.27    6.92  41.73      1.56      1.88


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60          4.16
     Dep. Storage     (mm)=       2.00          6.22
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     334.28         53.00
     Mannings n             =     0.015         0.270

     Max.Eff.Inten.(mm/hr)=      82.92         85.28
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       5.59 (ii)    15.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.20          0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.23          0.56      2.627 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17      6.00
     RUNOFF VOLUME    (mm)=      60.92         34.25     50.36
     TOTAL RAINFALL   (mm)=      62.92         62.92     62.92
     RUNOFF COEFFICIENT   =       0.97          0.54      0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40490):    16.76    2.627     6.00    50.36
     + ID2= 2 ( 60480):  1166.52   37.275     6.75    41.73
       ==========================================================
       ID = 3 ( 50490):  1183.28   37.619     6.75    41.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00          85.84        0.0450
                   6.00          84.32        0.0450
                  12.00          84.21        0.0450
                  18.00          84.12        0.0450
                  24.00          84.08        0.0450
                  30.00          84.10        0.0450
                  36.00          84.03        0.0450
                  42.00          83.92        0.0450
                  48.00          83.88        0.0450
                  54.00          82.88        0.0350      Main Channel
                  60.00          83.12    0.0350 /0.0450  Main Channel
                  64.00          83.65        0.0450
                  68.00          83.60        0.0450
                  72.00          83.67        0.0450
                  76.00          83.70        0.0450
                  80.00          83.82        0.0450
                  84.00          83.90        0.0450
                  88.00          84.05        0.0450
                  92.00          84.16        0.0450
                 100.00          85.83        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03        0.1         0.32      46.08
        0.31   83.19    .129E+04        0.8         0.57      26.14
        0.47   83.35    .259E+04        2.3         0.79      18.75
        0.62   83.50    .418E+04        4.5         0.96      15.43
        0.78   83.66    .626E+04        7.3         1.04      14.28
        0.93   83.81    .101E+05       11.9         1.05      14.10
        1.09   83.97    .153E+05       17.6         1.02      14.55
        1.24   84.13    .231E+05       26.2         1.00      14.73
        1.40   84.28    .341E+05       41.2         1.07      13.79
        1.55   84.44    .460E+05       61.7         1.19      12.44
        1.71   84.59    .582E+05       86.6         1.32      11.21
        1.86   84.75    .706E+05      115.2         1.45      10.21
        2.02   84.90    .831E+05      147.5         1.57       9.39
        2.17   85.06    .959E+05      183.2         1.70       8.72
        2.33   85.21    .109E+06      222.2         1.81       8.16
        2.48   85.37    .122E+06      264.5         1.93       7.68
        2.64   85.52    .135E+06      310.0         2.03       7.27
        2.79   85.68    .149E+06      358.5         2.14       6.91
        2.95   85.83    .162E+06      410.1         2.24       6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1183.28    37.62    6.75  41.85      1.36      1.06
   OUTFLOW: ID= 1 ( 60490) 1183.28    36.87    6.92  41.85      1.35      1.05


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92          4.72
     Dep. Storage     (mm)=       2.00          5.43
     Average Slope     (%)=       2.10          2.10
     Length            (m)=     370.92         40.00
     Mannings n             =     0.015         0.260

     Max.Eff.Inten.(mm/hr)=      82.92         98.59
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.27 (ii)    12.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.80          0.82      3.520 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08      6.00
     RUNOFF VOLUME    (mm)=      60.92         35.62     51.11
     TOTAL RAINFALL   (mm)=      62.92         62.92     62.92
     RUNOFF COEFFICIENT   =       0.97          0.57      0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40810):    20.64    3.520     6.00    51.11
     + ID2= 2 ( 60490):  1183.28   36.872     6.92    41.85
       ==========================================================
       ID = 3 ( 50810):  1203.92   37.178     6.92    42.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52          6.81
     Dep. Storage     (mm)=       2.00          9.76
     Average Slope     (%)=       3.20          3.20
     Length            (m)=     249.31         47.00
     Mannings n             =     0.015         0.350

     Max.Eff.Inten.(mm/hr)=      82.92         42.89
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       3.66 (ii)    15.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.25          0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.37          0.46      0.678 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17      6.00
     RUNOFF VOLUME    (mm)=      60.92         24.07     30.51
     TOTAL RAINFALL   (mm)=      62.92         62.92     62.92
     RUNOFF COEFFICIENT   =       0.97          0.38      0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40500):     9.32    0.678     6.00    30.51
     + ID2= 2 ( 50810):  1203.92   37.178     6.92    42.01
       ==========================================================
       ID = 3 ( 50500):  1213.24   37.317     6.92    41.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.275 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.065
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.924
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.523

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.085 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.037
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
---------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      82.92        54.89
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.34 (ii)    2.34 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.30         0.30
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.00          0.103 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      60.92        33.07          60.64
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.53           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
---------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25        13.25
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     420.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      82.92        88.36
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       5.29 (ii)    7.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.21         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.76         2.66          4.416 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      60.92        38.88          45.49
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.62           0.72


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    1.8600      0.9862
                          0.0560      0.3250   |    2.1000      1.0580
                          0.2600      0.4718   |    2.2000      1.2000
                          0.7400      0.6512   |   10.0000      1.2500
                          1.4100      0.8427   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.500     4.416      6.00      45.49
   OUTFLOW: ID= 1 (******)     26.500     0.870      6.42      45.44
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.70
                  TIME SHIFT OF PEAK FLOW         (min)= 25.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6885

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  --------------------------
  | Junction Command(30651004) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    26.50   0.870     6.42    45.44
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    26.50   0.870     6.42    45.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
---------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89         0.04
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=     115.50         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      82.92        54.89
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       3.95 (ii)    3.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.24         0.24
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.88         0.01          0.889 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      60.92        33.07          60.64
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.53           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    26.50   0.870     6.42    45.44
      + ID2= 2 (******):     3.93   0.889     6.00    60.64
        ================================================
        ID = 3 (******):     4.86   0.964     6.00    55.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.86   0.964     6.00    55.36
      + ID2= 2 (******):     0.45   0.103     6.00    60.64
        ================================================
        ID = 1 (******):     5.31   1.068     6.00    55.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.31   1.068     6.00    55.81
      + ID2= 2 (******):    26.50   0.870     6.42    45.44
        ================================================
        ID = 3 (******):    31.81   1.382     6.00    47.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB             |
| NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.45

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   0.835 (i)
     TIME TO PEAK    (hrs)=   6.33
     RUNOFF VOLUME    (mm)=  33.072
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62   0.835     6.33    33.07
      + ID2= 2 (******):    31.81   1.382     6.00    47.17
        ================================================
        ID = 3 (******):    46.43   1.894     6.33    42.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         443.75        0.0450
                   8.50         443.74        0.0450
                  35.47         443.64        0.0450
                  64.60         443.29        0.0450
                  74.71         443.18        0.0450
                  80.25         443.17        0.0450
                 112.17         443.12    0.0450 /0.0350  Main Channel
                 131.57         442.76        0.0350      Main Channel
                 137.50         442.66        0.0350      Main Channel
                 137.91         442.67        0.0350      Main Channel
                 152.28         442.24        0.0350      Main Channel
                 167.40         441.39        0.0350      Main Channel
                 178.29         441.56        0.0350      Main Channel
                 216.75         442.01        0.0350      Main Channel
                 221.54         442.05    0.0350 /0.0450  Main Channel
                 334.66         442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)         (m/s)      (min)
        0.05   441.45    .114E+03       0.0          0.27       55.89
        0.11   441.50    .457E+03       0.2          0.43       35.21
        0.16   441.56    .103E+04       0.6          0.57       26.87
        0.22   441.61    .185E+04       1.4          0.67       22.84
        0.27   441.67    .297E+04       2.5          0.77       19.84
        0.33   441.72    .437E+04       4.1          0.87       17.59
        0.38   441.78    .605E+04       6.4          0.96       15.85
        0.44   441.83    .802E+04       9.2          1.05       14.47
        0.49   441.89    .103E+05      12.8          1.14       13.35
        0.55   441.94    .128E+05      17.2          1.23       12.42
        0.60   442.00    .157E+05      22.4          1.31       11.63
        0.66   442.05    .188E+05      28.3          1.38       11.07
        0.71   442.11    .225E+05      36.9          1.50       10.16
        0.78   442.17    .277E+05      48.4          1.60        9.54
        0.84   442.24    .339E+05      61.9          1.67        9.13
        0.91   442.30    .412E+05      77.1          1.71        8.90
        0.97   442.36    .495E+05      94.7          1.75        8.71
        1.03   442.43    .589E+05     114.9          1.79        8.54
        1.10   442.49    .693E+05     137.9          1.82        8.38

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    46.43     1.89    6.33  42.73      0.25       0.71
   OUTFLOW: ID= 1 (******)    46.43     1.65    6.58  42.73      0.23       0.69


---------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
---------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):     46.43      1.65      6.58    42.73
     ================================================
     ID= 2  (   2)    :    41.38      0.99      6.58    42.73
     ID= 3  (   2)    :     5.05      0.66      6.58    42.73
     ID= 4  (   2)    :     0.00      0.00      0.00     0.00
     ID= 5  (   2)    :     0.00      0.00      0.00     0.00
     ID= 6  (   2)    :     0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
---------------------
| CALIB             |
| NASHYD   (******)|   Area    (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.024 (i)
     TIME TO PEAK    (hrs)=   6.000
```

```
      RUNOFF VOLUME    (mm)=  32.923
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.523

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.024     6.00    32.92
      + ID2= 2 (******):     5.05   0.657     6.58    42.73
        ================================================
        ID = 3 (******):     5.27   0.661     6.58    42.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         433.07        0.0450
                  59.66         432.39        0.0450
                  94.25         432.03        0.0450
                 115.71         431.82        0.0450
                 143.84         431.84    0.0450 /0.0350  Main Channel
                 163.59         431.75        0.0350      Main Channel
                 177.84         431.73        0.0350      Main Channel
                 199.51         431.70        0.0350      Main Channel
                 231.74         431.53        0.0350      Main Channel
                 283.71         431.44        0.0350      Main Channel
                 294.09         431.43        0.0350      Main Channel
                 325.65         431.42        0.0350      Main Channel
                 355.24         431.24        0.0350      Main Channel
                 383.70         431.43        0.0350      Main Channel
                 476.17         432.06    0.0350 /0.0450  Main Channel
                 510.88         432.23        0.0450
                 558.61         432.37        0.0450
                 589.84         432.57        0.0450
                 622.97         432.73        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   431.32    .108E+03       0.3         0.30       6.68
        0.15   431.39    .434E+03       1.7         0.47       4.21
        0.23   431.47    .119E+04       5.0         0.50       3.99
        0.30   431.54    .252E+04      13.9         0.66       3.02
        0.38   431.62    .417E+04      29.3         0.84       2.37
        0.45   431.69    .604E+04      50.1         0.99       2.01
        0.53   431.77    .828E+04      73.9         1.06       1.87
        0.60   431.84    .109E+05     108.8         1.19       1.67
        0.68   431.92    .142E+05     159.5         1.34       1.48
        0.76   432.01    .176E+05     219.4         1.48       1.34
        0.84   432.09    .213E+05     290.0         1.62       1.22
        0.92   432.17    .252E+05     374.6         1.77       1.12
        1.01   432.25    .293E+05     469.2         1.91       1.04
        1.09   432.33    .338E+05     573.9         2.02       0.98
        1.17   432.41    .386E+05     689.9         2.13       0.93
        1.25   432.49    .435E+05     817.2         2.24       0.89
        1.33   432.57    .487E+05     955.3         2.34       0.85
        1.41   432.65    .541E+05    1103.5         2.43       0.82
        1.49   432.73    .597E+05    1262.7         2.52       0.79

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     5.27     0.66     6.58   42.32      0.10      0.33
   OUTFLOW: ID= 1 (******)     5.27     0.64     6.67   42.32      0.09      0.33


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.275     6.17    33.07
      + ID2= 2 (******):     0.45   0.050     6.00    32.92
        ================================================
        ID = 3 (******):     4.32   0.311     6.17    33.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.311     6.17    33.05
      + ID2= 2 (******):     5.27   0.643     6.67    42.32
        ================================================
        ID = 1 (******):     9.59   0.803     6.58    38.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         430.79        0.0450
                  23.82         429.79    0.0450 /0.0350  Main Channel
                  44.05         429.11        0.0350      Main Channel
                  70.46         428.15        0.0350      Main Channel
                 112.31         427.60        0.0350      Main Channel
                 150.77         427.27        0.0350      Main Channel
                 179.17         427.15        0.0350      Main Channel
                 214.90         427.16        0.0350      Main Channel
                 261.89         427.25        0.0350      Main Channel
                 317.65         427.56        0.0350      Main Channel
                 382.75         427.99        0.0350      Main Channel
                 394.40         428.11        0.0350      Main Channel
                 432.80         428.07        0.0350      Main Channel
                 432.91         428.07        0.0350      Main Channel
                 462.57         428.15        0.0350      Main Channel
                 522.90         429.79    0.0350 /0.0450  Main Channel
                 585.04         429.90        0.0450
                 731.92         430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04      11.5         0.73       2.99
        0.35   427.50    .570E+04      49.9         1.15       1.91
        0.53   427.68    .105E+05     119.2         1.49       1.47
        0.70   427.85    .163E+05     221.8         1.79       1.22
        0.88   428.03    .229E+05     360.8         2.06       1.06
        1.06   428.21    .312E+05     509.7         2.14       1.02
        1.23   428.38    .405E+05     771.0         2.49       0.88
        1.41   428.56    .500E+05    1076.3         2.82       0.77
        1.58   428.73    .598E+05    1423.8         3.12       0.70
        1.76   428.91    .699E+05    1812.5         3.40       0.64
        1.94   429.09    .802E+05    2241.5         3.66       0.60
        2.11   429.26    .907E+05    2709.1         3.91       0.56
        2.29   429.44    .102E+06    3215.8         4.15       0.53
        2.46   429.61    .113E+06    3761.6         4.38       0.50
        2.64   429.79    .124E+06    4346.4         4.59       0.48
        2.85   430.00    .139E+06    5173.9         4.88       0.45
        3.06   430.20    .156E+06    6075.9         5.12       0.43
        3.26   430.41    .173E+06    7054.9         5.33       0.41
        3.47   430.62    .193E+06    8114.3         5.52       0.40

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     9.59     0.80     6.58   38.15      0.01      0.73
   OUTFLOW: ID= 1 (******)     9.59     0.80     6.67   38.15      0.01      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.088 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.037
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.071 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  32.979
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.524

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.071     6.08    32.98
      + ID2= 2 (******):     0.97   0.088     6.08    33.04
        ================================================
        ID = 3 (******):     1.66   0.159     6.08    33.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.159     6.08    33.01
      + ID2= 2 (******):     9.59   0.798     6.67    38.15
        ================================================
        ID = 3 (******):    11.25   0.837     6.67    37.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):     11.25      0.84      6.67    37.39
     ================================================
     ID= 2  (   2)    :    11.25      0.84      6.67    37.39
     ID= 3  (   2)    :     0.00      0.00      6.67    37.39
     ID= 4  (   2)    :     0.00      0.00      0.00     0.00
     ID= 5  (   2)    :     0.00      0.00      0.00     0.00
     ID= 6  (   2)    :     0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.96          0.25
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.64          0.54
     Length            (m)=      63.89        157.20
     Mannings n           =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=      82.92         54.89
                 over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.41 (ii)     6.63 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.30          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.22          0.03          0.252 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      60.92         33.07         55.07
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.53          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.32          0.58
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.70          0.60
     Length            (m)=     166.18        124.91
     Mannings n           =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=      82.92         54.89
                 over (min)        5.00         10.00
     Storage Coeff.  (min)=       4.16 (ii)     7.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.24          0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.53          0.07          0.595 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      60.92         33.07         55.35
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.53          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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38863>
38864> --------------------
38865> | ADD HYD  (  0043)|
38866> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
38867> --------------------           (ha)    (cms)    (hrs)     (mm)
38868>         ID1= 1 (******):     2.90   0.595     6.00    55.35
38869>       + ID2= 2 (******):     1.21   0.252     6.00    55.07
38870>         ==================================================
38871>         ID = 3 (  0043):     4.11   0.847     6.00    55.27
38872>
38873>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
38874> ------------------------------------------------------------------------------
38875> --------------------
38876> | DIVERTHYD(******)|
38877> | IN= 1   # OUT= 5 |
38878> --------------------
38879>      Outflow / Inflow  Relationships
38880>
38881>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
38882>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
38883>        0.00     0.00     0.00     0.00     0.00     0.00
38884>        0.85     0.00     0.00     0.00     0.00     0.85
38885>        0.85     1.00     0.00     0.00     0.00     1.85
38886>        0.85   100.00     0.00     0.00     0.00   100.85
38887>
38888>                            AREA     QPEAK     TPEAK    R.V.
38889>                            (ha)     (cms)     (hrs)    (mm)
38890>      TOTAL HYD.(ID= 1):    4.11      0.85      6.00   55.27
38891>      ==================================================
38892>      ID= 2  (   2)    :    4.11      0.85      6.00   55.27
38893>      ID= 3  (   2)    :    0.00      0.00      6.00   55.27
38894>      ID= 4  (   2)    :    0.00      0.00      0.00    0.00
38895>      ID= 5  (   2)    :    0.00      0.00      0.00    0.00
38896>      ID= 6  (   2)    :    0.00      0.00      0.00    0.00
38897> ------------------------------------------------------------------------------
38898>
38899> --------------------
38900> | ADD HYD  (******)|
38901> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
38902> --------------------           (ha)    (cms)    (hrs)     (mm)
38903>         ID1= 1 (******):     0.00   0.000     6.67    37.39
38904>       + ID2= 2 (******):     4.11   0.847     6.00    55.27
38905>         ==================================================
38906>         ID = 3 (******):     4.11   0.847     6.00    55.27
38907>
38908>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
38909> ------------------------------------------------------------------------------
38910> --------------------
38911> | DIVERTHYD(******)|
38912> | IN= 1   # OUT= 5 |
38913> --------------------
38914>      Outflow / Inflow  Relationships
38915>
38916>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
38917>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
38918>        0.00     0.00     0.00     0.00     0.00     0.00
38919>        0.00     5.20     0.00     0.00     0.00     5.20
38920>        1.00     5.20     0.00     0.00     0.00     6.20
38921>      100.00     5.20     0.00     0.00     0.00   105.20
38922>
38923>                            AREA     QPEAK     TPEAK    R.V.
38924>                            (ha)     (cms)     (hrs)    (mm)
38925>      TOTAL HYD.(ID= 1):    4.11      0.85      6.00   55.27
38926>      ==================================================
38927>      ID= 2  (   2)    :    0.00      0.00      6.00   55.27
38928>      ID= 3  (   2)    :    4.11      0.85      6.00   55.27
38929>      ID= 4  (   2)    :    0.00      0.00      0.00    0.00
38930>      ID= 5  (   2)    :    0.00      0.00      0.00    0.00
38931>      ID= 6  (   2)    :    0.00      0.00      0.00    0.00
38932> ------------------------------------------------------------------------------
38933>
38934> --------------------
38935> | ADD HYD  (******)|
38936> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
38937> --------------------           (ha)    (cms)    (hrs)     (mm)
38938>         ID1= 1 (******):    11.25   0.837     6.67    37.39
38939>       + ID2= 2 (******):     0.00   0.000     6.00    55.27
38940>         ==================================================
38941>         ID = 3 (******):    11.25   0.837     6.67    37.39
38942>
38943>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
38944> ------------------------------------------------------------------------------
38945> --------------------
38946> | DIVERTHYD(******)|
38947> | IN= 1   # OUT= 5 |
38948> --------------------
38949>      Outflow / Inflow  Relationships
38950>
38951>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
38952>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
38953>        0.00     0.00     0.00     0.00     0.00     0.00
38954>        1.00     0.00     0.00     0.00     0.00     1.00
38955>      100.00     0.00     0.00     0.00     0.00   100.00
38956>
38957>                            AREA     QPEAK     TPEAK    R.V.
38958>                            (ha)     (cms)     (hrs)    (mm)
38959>      TOTAL HYD.(ID= 1):   11.25      0.84      6.67   37.39
38960>      ==================================================
38961>      ID= 2  (   2)    :   11.25      0.84      6.67   37.39
38962>      ID= 3  (   2)    :    0.00      0.00      6.67   37.39
38963>      ID= 4  (   2)    :    0.00      0.00      0.00    0.00
38964>      ID= 5  (   2)    :    0.00      0.00      0.00    0.00
38965>      ID= 6  (   2)    :    0.00      0.00      0.00    0.00
38966> ------------------------------------------------------------------------------
38967> --------------------
38968> | DIVERTHYD(******)|
38969> | IN= 1   # OUT= 5 |
38970> --------------------
38971>      Outflow / Inflow  Relationships
38972>
38973>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
38974>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
38975>        0.00     0.00     0.00     0.00     0.00     0.00
38976>        0.00     0.00     0.00     0.00     0.00     0.00
38977>        0.01     0.00     0.00     0.00     0.00     0.01
38978>        0.06     0.00     0.00     0.00     0.00     0.06
38979>        0.08     0.00     0.00     0.00     0.00     0.08
38980>        0.12     0.00     0.00     0.00     0.00     0.12
38981>        0.20     0.00     0.00     0.00     0.00     0.20
38982>        0.25     0.00     0.00     0.00     0.00     0.25
38983>        0.30     0.00     0.00     0.00     0.00     0.30
38984>        0.33     0.00     0.00     0.00     0.00     0.33
38985>        0.37     0.00     0.00     0.00     0.00     0.37
38986>        0.39     0.00     0.00     0.00     0.00     0.39
38987>        0.42     1.43     0.00     0.00     0.00     1.85
38988>        0.44     8.83     0.00     0.00     0.00     9.27
38989>        0.47    25.03     0.00     0.00     0.00    25.50
38990>        0.49    52.11     0.00     0.00     0.00    52.61
38991>        0.52    91.81     0.00     0.00     0.00    92.33
38992>        0.53   126.04     0.00     0.00     0.00   126.57
38993>
38994>                            AREA     QPEAK     TPEAK    R.V.
38995>                            (ha)     (cms)     (hrs)    (mm)
38996>      TOTAL HYD.(ID= 1):   11.25      0.84      6.67   37.39
38997>      ==================================================
38998>      ID= 2  (   2)    :    8.07      0.40      6.67   37.39
38999>      ID= 3  (   2)    :    3.19      0.44      6.67   37.39
39000>      ID= 4  (   2)    :    0.00      0.00      0.00    0.00
39001>      ID= 5  (   2)    :    0.00      0.00      0.00    0.00
39002>      ID= 6  (   2)    :    0.00      0.00      0.00    0.00
39003> ------------------------------------------------------------------------------
39004> --------------------
39005> | CALIB            |
39006> | STANDHYD (******)|   Area    (ha)=   0.82
39007> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
39008> --------------------
39009>                            IMPERVIOUS    PERVIOUS (i)
39010>      Surface Area     (ha)=       0.81          0.01
39011>      Dep. Storage     (mm)=       2.00          4.48
39012>      Average Slope     (%)=       0.50          1.00
39013>      Length            (m)=      18.40          0.00
39014>      Mannings n           =      0.013         0.030
39015>
```

```
39016>      Max.Eff.Inten.(mm/hr)=      82.92         54.89
39017>                 over (min)        5.00          5.00
39018>      Storage Coeff.  (min)=       1.23 (ii)     1.23 (ii)
39019>      Unit Hyd. Tpeak (min)=       5.00          5.00
39020>      Unit Hyd. peak  (cms)=       0.33          0.33
39021>                                                          *TOTALS*
39022>      PEAK FLOW       (cms)=       0.19          0.00          0.188 (iii)
39023>      TIME TO PEAK    (hrs)=       6.00          6.00           6.00
39024>      RUNOFF VOLUME    (mm)=      60.92         33.07          60.64
39025>      TOTAL RAINFALL   (mm)=      62.92         62.92          62.92
39026>      RUNOFF COEFFICIENT   =       0.97          0.53           0.96
39027>
39028> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
39029>
39030>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
39031>            CN*  =  85.0    Ia = Dep. Storage  (Above)
39032>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
39033>            THAN THE STORAGE COEFFICIENT.
39034>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39035>
39036> ------------------------------------------------------------------------------
39037>
39038> --------------------
39039> | ADD HYD  (******)|
39040> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
39041> --------------------           (ha)    (cms)    (hrs)     (mm)
39042>         ID1= 1 (******):     0.82   0.188     6.00    60.64
39043>       + ID2= 2 (******):     0.00   0.000     6.67    37.39
39044>         ==================================================
39045>         ID = 3 (******):     0.82   0.188     6.00    60.64
39046>
39047>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39048> ------------------------------------------------------------------------------
39049>
39050> --------------------
39051> | ADD HYD  (******)|
39052> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
39053> --------------------           (ha)    (cms)    (hrs)     (mm)
39054>         ID1= 3 (******):     0.82   0.188     6.00    60.64
39055>       + ID2= 2 (******):     3.19   0.438     6.67    37.39
39056>         ==================================================
39057>         ID = 1 (******):     4.01   0.450     6.67    42.15
39058>
39059>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39060> ------------------------------------------------------------------------------
39061> --------------------
39062> | DIVERTHYD(******)|
39063> | IN= 1   # OUT= 5 |
39064> --------------------
39065>      Outflow / Inflow  Relationships
39066>
39067>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
39068>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
39069>        0.00     0.00     0.00     0.00     0.00     0.00
39070>        0.00     0.00     0.00     0.00     0.00     0.00
39071>        0.03     0.00     0.00     0.00     0.00     0.03
39072>        0.04     0.00     0.00     0.00     0.00     0.04
39073>        0.09     0.00     0.00     0.00     0.00     0.09
39074>        0.12     0.00     0.00     0.00     0.00     0.13
39075>        0.20     0.00     0.00     0.00     0.00     0.20
39076>        0.30     0.00     0.00     0.00     0.00     0.30
39077>        0.37     0.00     0.00     0.00     0.00     0.37
39078>        0.43     0.00     0.00     0.00     0.00     0.43
39079>        0.48     0.00     0.00     0.00     0.00     0.48
39080>        0.52     0.00     0.00     0.00     0.00     0.52
39081>        0.57     0.00     0.00     0.00     0.00     0.57
39082>        0.67     0.00     0.00     0.00     0.00     0.67
39083>        0.68     0.00     0.00     0.00     0.00     0.68
39084>        0.68     0.02     0.00     0.00     0.00     0.70
39085>        0.72     0.56     0.00     0.00     0.00     1.28
39086>        0.73     0.75     0.01     0.00     0.00     1.48
39087>        1.10     1.87     0.54     0.00     0.00     3.51
39088>        1.40     2.25     2.61     0.00     0.00     6.26
39089>
39090>                            AREA     QPEAK     TPEAK    R.V.
39091>                            (ha)     (cms)     (hrs)    (mm)
39092>      TOTAL HYD.(ID= 1):    4.01      0.45      6.67   42.15
39093>      ==================================================
39094>      ID= 2  (   3)    :    4.00      0.45      6.67   42.15
39095>      ID= 3  (   3)    :    0.00      0.00      6.67   42.15
39096>      ID= 4  (   3)    :    0.00      0.00      6.67   42.15
39097>      ID= 5  (   3)    :    0.00      0.00      0.00    0.00
39098>      ID= 6  (   3)    :    0.00      0.00      0.00    0.00
39099> ------------------------------------------------------------------------------
39100>
39101> --------------------
39102> | ADD HYD  (******)|
39103> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
39104> --------------------           (ha)    (cms)    (hrs)     (mm)
39105>         ID1= 1 (******):     8.07   0.398     6.67    37.39
39106>       + ID2= 2 (******):     4.00   0.449     6.67    42.15
39107>         ==================================================
39108>         ID = 3 (******):    12.07   0.848     6.67    38.97
39109>
39110>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39111> ------------------------------------------------------------------------------
39112> --------------------
39113> | CALIB            |
39114> | NASHYD   (******)|   Area     (ha)=  11.36   Curve Number    (CN)= 85.0
39115> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
39116> --------------------   U.H. Tp(hrs)=   0.33
39117>
39118>      Unit Hyd Qpeak  (cms)=   1.315
39119>
39120>      PEAK FLOW       (cms)=   0.808 (i)
39121>      TIME TO PEAK    (hrs)=   6.167
39122>      RUNOFF VOLUME    (mm)=  33.065
39123>      TOTAL RAINFALL   (mm)=  62.921
39124>      RUNOFF COEFFICIENT   =   0.526
39125>
39126>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39127>
39128> ------------------------------------------------------------------------------
39129> --------------------
39130> | CALIB            |
39131> | NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
39132> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
39133> --------------------   U.H. Tp(hrs)=   0.22
39134>
39135>      Unit Hyd Qpeak  (cms)=   0.130
39136>
39137>      PEAK FLOW       (cms)=   0.070 (i)
39138>      TIME TO PEAK    (hrs)=   6.083
39139>      RUNOFF VOLUME    (mm)=  33.030
39140>      TOTAL RAINFALL   (mm)=  62.921
39141>      RUNOFF COEFFICIENT   =   0.525
39142>
39143>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39144>
39145> ------------------------------------------------------------------------------
39146> --------------------
39147> | CALIB            |
39148> | STANDHYD ( 40600)|   Area     (ha)=  78.37
39149> |ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
39150> --------------------
39151>                                  IMPERVIOUS    PERVIOUS (i)
39152>      Surface Area     (ha)=       54.14         24.23
39153>      Dep. Storage     (mm)=        2.00          5.78
39154>      Average Slope     (%)=        1.20          1.20
39155>      Length            (m)=      722.82         47.00
39156>      Mannings n           =       0.015         0.260
39157>
39158>      Max.Eff.Inten.(mm/hr)=       82.92         71.76
39159>                 over (min)        10.00         20.00
39160>      Storage Coeff.  (min)=        9.31 (ii)    19.90 (ii)
39161>      Unit Hyd. Tpeak (min)=       10.00         20.00
39162>      Unit Hyd. peak  (cms)=        0.12          0.06
39163>                                                          *TOTALS*
39164>      PEAK FLOW       (cms)=        8.17          2.47          9.899 (iii)
39165>      TIME TO PEAK    (hrs)=        6.00          6.17           6.00
39166>      RUNOFF VOLUME    (mm)=       60.92         32.51          48.49
39167>      TOTAL RAINFALL   (mm)=       62.92         62.92          62.92
39168>      RUNOFF COEFFICIENT   =        0.97          0.52           0.77
```

```
39169>
39170>
39171>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
39172>              CN*  =  79.0     Ia = Dep. Storage  (Above)
39173>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
39174>            THAN THE STORAGE COEFFICIENT.
39175>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39176>
39177> --------------------------------------------------------------------------------
39178> --------------------
39179> | ROUTE CHN( 60600)|
39180> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
39181> --------------------
39182>                <------ DATA FOR SECTION (   1.1) ------>
39183>                Distance      Elevation       Manning
39184>                    0.00        144.07        0.0450
39185>                    9.00        143.84        0.0450
39186>                   12.00        142.90        0.0450
39187>                   15.00        142.48        0.0450
39188>                   18.00        142.43    0.0450 /0.0350  Main Channel
39189>                   21.00        142.31        0.0350      Main Channel
39190>                   24.00        142.12        0.0350      Main Channel
39191>                   27.00        142.44    0.0350 /0.0450  Main Channel
39192>                   30.00        142.71        0.0450
39193>                   33.00        143.18        0.0450
39194>                   36.00        143.27        0.0450
39195>                   37.00        143.36        0.0450
39196>                   38.00        143.64        0.0450
39197>                   39.00        143.92        0.0450
39198>                   40.00        143.93        0.0450
39199>                   45.00        144.18        0.0450
39200>
39201>       <---------------------- TRAVEL TIME TABLE ----------------------->
39202>        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
39203>          (m)      (m)      (cu.m.)      (cms)         (m/s)      (min)
39204>         0.08   142.20    .282E+02        0.0          0.24      26.26
39205>         0.16   142.27    .113E+03        0.1          0.38      16.54
39206>         0.23   142.35    .257E+03        0.3          0.48      13.09
39207>         0.31   142.43    .477E+03        0.7          0.57      11.02
39208>         0.42   142.54    .969E+03        2.0          0.76       8.24
39209>         0.53   142.65    .157E+04        3.8          0.92       6.80
39210>         0.64   142.76    .224E+04        6.3          1.06       5.90
39211>         0.75   142.87    .299E+04        9.5          1.19       5.26
39212>         0.86   142.98    .379E+04       13.2          1.31       4.77
39213>         0.97   143.09    .463E+04       17.6          1.43       4.37
39214>         1.08   143.20    .552E+04       22.5          1.53       4.09
39215>         1.19   143.31    .653E+04       27.9          1.60       3.90
39216>         1.30   143.42    .761E+04       34.4          1.70       3.69
39217>         1.41   143.53    .874E+04       41.7          1.79       3.49
39218>         1.52   143.64    .989E+04       49.7          1.89       3.32
39219>         1.63   143.75    .111E+05       58.3          1.98       3.17
39220>         1.74   143.85    .123E+05       66.9          2.04       3.06
39221>         1.85   143.96    .137E+05       73.2          2.01       3.11
39222>         1.96   144.07    .153E+05       81.5          2.00       3.13
39223>
39224>                                    <---- hydrograph ---->   <-pipe / channel->
39225>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
39226>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
39227>    INFLOW : ID= 2 ( 40600)   78.37     9.90    6.00  48.49      0.76      1.20
39228>    OUTFLOW: ID= 1 ( 60600)   78.37     9.47    6.08  48.49      0.75      1.19
39229>
39230>
39231>
39232> --------------------------------------------------------------------------------
39233> --------------------
39234> | CALIB            |
39235> | STANDHYD ( 40610)|   Area    (ha)=   3.94
39236> |ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
39237> --------------------
39238>                                IMPERVIOUS    PERVIOUS (i)
39239>      Surface Area     (ha)=       1.75         2.18
39240>      Dep. Storage     (mm)=       2.00         8.00
39241>      Average Slope     (%)=       2.90         2.90
39242>      Length            (m)=     162.03        40.00
39243>      Mannings n           =      0.015        0.340
39244>
39245>      Max.Eff.Inten.(mm/hr)=      82.92        56.09
39246>                   over (min)        5.00        15.00
39247>      Storage Coeff.  (min)=       2.91 (ii)   12.48 (ii)
39248>      Unit Hyd. Tpeak (min)=       5.00        15.00
39249>      Unit Hyd. peak  (cms)=       0.28         0.08
39250>                                                    *TOTALS*
39251>      PEAK FLOW       (cms)=       0.29         0.21          0.462 (iii)
39252>      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
39253>      RUNOFF VOLUME    (mm)=      60.92        26.89         37.65
39254>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
39255>      RUNOFF COEFFICIENT   =       0.97         0.43          0.60
39256>
39257> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
39258>
39259>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
39260>              CN*  =  76.9     Ia = Dep. Storage  (Above)
39261>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
39262>            THAN THE STORAGE COEFFICIENT.
39263>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39264>
39265> --------------------------------------------------------------------------------
39266>
39267> --------------------
39268> | ADD HYD  ( 50600)|
39269> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39270> --------------------         (ha)    (cms)    (hrs)      (mm)
39271>         ID1= 1 ( 40610):     3.94   0.462     6.00    37.65
39272>       + ID2= 2 ( 60600):    78.37   9.475     6.08    48.49
39273>         ================================================
39274>         ID = 3 ( 50600):    82.31   9.764     6.08    47.97
39275>
39276>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39277> --------------------------------------------------------------------------------
39278> --------------------
39279> | ROUTE CHN( 60610)|
39280> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
39281> --------------------
39282>                <------ DATA FOR SECTION (   1.1) ------>
39283>                Distance      Elevation       Manning
39284>                    0.00        143.40        0.0450
39285>                    2.00        142.92        0.0450
39286>                    4.00        142.14        0.0450
39287>                    6.00        141.49        0.0450
39288>                    8.00        141.11        0.0450
39289>                   10.00        141.00    0.0450 /0.0350  Main Channel
39290>                   12.00        140.98        0.0350      Main Channel
39291>                   14.00        140.82        0.0350      Main Channel
39292>                   16.00        141.02    0.0350 /0.0450  Main Channel
39293>                   18.00        141.19        0.0450
39294>                   20.00        141.19        0.0450
39295>                   22.00        141.44        0.0450
39296>                   24.00        142.00        0.0450
39297>                   26.00        142.20        0.0450
39298>                   28.00        142.39        0.0450
39299>                   30.00        142.96        0.0450
39300>                   31.00        143.13        0.0450
39301>                   32.00        143.28        0.0450
39302>                   33.00        143.41        0.0450
39303>                   34.00        143.44        0.0450
39304>
39305>       <---------------------- TRAVEL TIME TABLE ----------------------->
39306>        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
39307>          (m)      (m)      (cu.m.)      (cms)         (m/s)      (min)
39308>         0.09   140.91    .314E+02        0.0          0.24      23.12
39309>         0.18   141.00    .132E+03        0.1          0.31      17.83
39310>         0.33   141.14    .502E+03        0.9          0.58       9.54
39311>         0.47   141.29    .107E+04        2.4          0.74       7.47
39312>         0.61   141.43    .175E+04        4.7          0.89       6.20
39313>         0.75   141.57    .251E+04        7.9          1.05       5.31
39314>         0.89   141.71    .332E+04       11.8          1.19       4.68
39315>         1.03   141.85    .416E+04       16.5          1.32       4.21
39316>         1.17   141.99    .506E+04       21.8          1.44       3.86
39317>         1.31   142.13    .601E+04       27.5          1.52       3.64
39318>         1.45   142.27    .705E+04       34.0          1.61       3.46
39319>         1.59   142.41    .818E+04       41.5          1.69       3.29
39320>         1.73   142.55    .936E+04       50.2          1.79       3.11
39321>         1.88   142.69    .106E+05       59.8          1.88       2.95
39322>         2.02   142.84    .118E+05       70.2          1.97       2.81
39323>         2.16   142.98    .132E+05       81.2          2.06       2.70
39324>         2.30   143.12    .145E+05       92.6          2.12       2.61
39325>         2.44   143.26    .159E+05      104.8          2.19       2.54
39326>         2.58   143.40    .174E+05      117.7          2.24       2.47
39327>
39328>                                    <---- hydrograph ---->   <-pipe / channel->
39329>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
39330>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
39331>    INFLOW : ID= 2 ( 50600)   82.31     9.76    6.08  47.97      0.82      1.11
39332>    OUTFLOW: ID= 1 ( 60610)   82.31     9.21    6.17  47.97      0.80      1.09
39333>
39334>
39335>
39336> --------------------------------------------------------------------------------
39337> --------------------
39338> | CALIB            |
39339> | STANDHYD ( 40620)|   Area    (ha)=   5.67
39340> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
39341> --------------------
39342>                                IMPERVIOUS    PERVIOUS (i)
39343>      Surface Area     (ha)=       4.30         1.37
39344>      Dep. Storage     (mm)=       2.00         5.59
39345>      Average Slope     (%)=       1.50         1.50
39346>      Length            (m)=     194.41        43.00
39347>      Mannings n           =      0.015        0.270
39348>
39349>      Max.Eff.Inten.(mm/hr)=      82.92        93.49
39350>                   over (min)        5.00        15.00
39351>      Storage Coeff.  (min)=       3.96 (ii)   12.60 (ii)
39352>      Unit Hyd. Tpeak (min)=       5.00        15.00
39353>      Unit Hyd. peak  (cms)=       0.24         0.08
39354>                                                    *TOTALS*
39355>      PEAK FLOW       (cms)=       0.78         0.22          0.976 (iii)
39356>      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
39357>      RUNOFF VOLUME    (mm)=      60.92        35.04         50.74
39358>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
39359>      RUNOFF COEFFICIENT   =       0.97         0.56          0.81
39360>
39361> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
39362>
39363>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
39364>              CN*  =  79.0     Ia = Dep. Storage  (Above)
39365>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
39366>            THAN THE STORAGE COEFFICIENT.
39367>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39368>
39369> --------------------------------------------------------------------------------
39370>
39371> --------------------
39372> | ADD HYD  ( 50610)|
39373> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39374> --------------------         (ha)    (cms)    (hrs)      (mm)
39375>         ID1= 1 ( 40620):     5.67   0.976     6.00    50.74
39376>       + ID2= 2 ( 60610):    82.31   9.210     6.17    47.97
39377>         ================================================
39378>         ID = 3 ( 50610):    87.98   9.582     6.17    48.15
39379>
39380>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39381> --------------------------------------------------------------------------------
39382> --------------------
39383> | ROUTE CHN( 60620)|
39384> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
39385> --------------------
39386>                <------ DATA FOR SECTION (   1.1) ------>
39387>                Distance      Elevation       Manning
39388>                    0.00        142.03        0.0450
39389>                    1.00        141.71        0.0450
39390>                    2.00        141.35        0.0450
39391>                    3.00        141.01        0.0450
39392>                    4.00        140.79        0.0450
39393>                    5.00        140.56        0.0450
39394>                    6.00        140.44        0.0450
39395>                    7.00        140.30    0.0450 /0.0350  Main Channel
39396>                    8.00        140.08        0.0350      Main Channel
39397>                    9.00        139.88        0.0350      Main Channel
39398>                   10.00        139.97        0.0350      Main Channel
39399>                   11.00        140.12        0.0350      Main Channel
39400>                   12.00        140.35    0.0350 /0.0450  Main Channel
39401>                   13.00        140.52        0.0450
39402>                   14.00        140.73        0.0450
39403>                   15.00        140.97        0.0450
39404>                   16.00        141.27        0.0450
39405>                   17.00        141.57        0.0450
39406>                   18.00        141.89        0.0450
39407>                   19.00        142.07        0.0450
39408>
39409>       <---------------------- TRAVEL TIME TABLE ----------------------->
39410>        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
39411>          (m)      (m)      (cu.m.)      (cms)         (m/s)      (min)
39412>         0.10   139.99    .161E+02        0.0          0.36       8.21
39413>         0.21   140.09    .579E+02        0.2          0.59       5.04
39414>         0.31   140.19    .120E+03        0.5          0.78       3.79
39415>         0.42   140.30    .200E+03        1.1          0.95       3.12
39416>         0.53   140.41    .313E+03        2.1          1.18       2.51
39417>         0.65   140.53    .456E+03        3.5          1.36       2.18
39418>         0.76   140.65    .630E+03        5.3          1.50       1.98
39419>         0.88   140.76    .826E+03        7.6          1.63       1.82
39420>         0.99   140.88    .104E+04       10.3          1.75       1.69
39421>         1.11   140.99    .128E+04       13.4          1.87       1.59
39422>         1.23   141.11    .154E+04       17.1          1.98       1.50
39423>         1.34   141.22    .180E+04       21.2          2.09       1.42
39424>         1.46   141.34    .209E+04       25.8          2.20       1.35
39425>         1.57   141.45    .239E+04       30.9          2.30       1.29
39426>         1.69   141.57    .270E+04       36.4          2.40       1.24
39427>         1.80   141.69    .303E+04       42.4          2.49       1.19
39428>         1.92   141.80    .337E+04       48.9          2.58       1.15
39429>         2.04   141.92    .373E+04       55.9          2.67       1.11
39430>         2.15   142.03    .411E+04       63.2          2.74       1.08
39431>
39432>                                    <---- hydrograph ---->   <-pipe / channel->
39433>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
39434>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
39435>    INFLOW : ID= 2 ( 50610)   87.98     9.58    6.17  48.15      0.96      1.72
39436>    OUTFLOW: ID= 1 ( 60620)   87.98     9.58    6.17  48.15      0.97      1.72
39437>
39438>
39439>
39440> --------------------------------------------------------------------------------
39441> --------------------
39442> | CALIB            |
39443> | STANDHYD ( 40640)|   Area    (ha)=   2.13
39444> |ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
39445> --------------------
39446>                                IMPERVIOUS    PERVIOUS (i)
39447>      Surface Area     (ha)=       0.91         1.23
39448>      Dep. Storage     (mm)=       2.00         7.60
39449>      Average Slope     (%)=       1.70         1.70
39450>      Length            (m)=     119.23        45.00
39451>      Mannings n           =      0.015        0.330
39452>
39453>      Max.Eff.Inten.(mm/hr)=      82.92        51.39
39454>                   over (min)        5.00        20.00
39455>      Storage Coeff.  (min)=       2.84 (ii)   15.10 (ii)
39456>      Unit Hyd. Tpeak (min)=       5.00        20.00
39457>      Unit Hyd. peak  (cms)=       0.28         0.07
39458>                                                    *TOTALS*
39459>      PEAK FLOW       (cms)=       0.15         0.10          0.224 (iii)
39460>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
39461>      RUNOFF VOLUME    (mm)=      60.92        27.46         38.03
39462>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
39463>      RUNOFF COEFFICIENT   =       0.97         0.44          0.60
39464>
39465> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
39466>
39467>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
39468>              CN*  =  78.1     Ia = Dep. Storage  (Above)
39469>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
39470>            THAN THE STORAGE COEFFICIENT.
39471>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39472>
39473> --------------------------------------------------------------------------------
39474>
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39475> --------------------
39476> | ADD HYD  ( 50630)|
39477> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39478> --------------------         (ha)    (cms)    (hrs)     (mm)
39479>         ID1= 1 ( 40640):     2.13   0.224     6.00    38.03
39480>       + ID2= 2 ( 60620):    87.98   9.585     6.17    48.15
39481>         ================================================
39482>         ID = 3 ( 50630):    90.11   9.710     6.17    47.91
39483>
39484>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39485> ------------------------------------------------------------------------------
39486> --------------------
39487> | CALIB            |
39488> | STANDHYD ( 40630)|   Area    (ha)=  20.54
39489> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
39490> --------------------
39491>                                IMPERVIOUS    PERVIOUS (i)
39492>      Surface Area     (ha)=      13.13         7.40
39493>      Dep. Storage     (mm)=       2.00         5.95
39494>      Average Slope     (%)=       1.40         1.40
39495>      Length            (m)=     370.01        42.00
39496>      Mannings n           =      0.015        0.270
39497>
39498>      Max.Eff.Inten.(mm/hr)=      82.92        68.68
39499>                   over (min)        5.00        20.00
39500>      Storage Coeff.  (min)=       5.95 (ii)   15.79 (ii)
39501>      Unit Hyd. Tpeak (min)=       5.00        20.00
39502>      Unit Hyd. peak  (cms)=       0.19         0.07
39503>                                                          *TOTALS*
39504>      PEAK FLOW       (cms)=       2.36         0.75          2.891 (iii)
39505>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
39506>      RUNOFF VOLUME    (mm)=      60.92        31.47          46.98
39507>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
39508>      RUNOFF COEFFICIENT   =       0.97         0.50           0.75
39509>
39510>
39511>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
39512>              CN*  =  79.5    Ia = Dep. Storage  (Above)
39513>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
39514>            THAN THE STORAGE COEFFICIENT.
39515>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39516>
39517> ------------------------------------------------------------------------------
39518>
39519> --------------------
39520> | ADD HYD  ( 50640)|
39521> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39522> --------------------         (ha)    (cms)    (hrs)     (mm)
39523>         ID1= 1 ( 40630):    20.54   2.891     6.00    46.98
39524>       + ID2= 2 ( 50630):    90.11   9.710     6.17    47.91
39525>         ================================================
39526>         ID = 3 ( 50640):   110.65  11.180     6.17    47.74
39527>
39528>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39529> ------------------------------------------------------------------------------
39530> --------------------
39531> | RESERVOIR(******)|     OVERFLOW IS ON
39532> | IN= 2---> OUT= 1 |
39533> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
39534> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
39535>                           0.0000      0.0000  |    3.4010      4.4390
39536>                           0.0530      0.4910  |    4.8380      5.5060
39537>                           0.0890      0.7040  |    5.8470      5.5380
39538>                           0.2040      1.0890  |    6.5980      5.9190
39539>                           0.3240      1.4800  |    7.2560      6.2250
39540>                           0.3890      1.7490  |    7.9030      6.4820
39541>                           0.4470      1.9970  |    8.4910      6.6820
39542>                           0.5090      2.3490  |   12.0680      7.1150
39543>                           0.7420      2.9150  |   20.0000      7.2000
39544>                           1.7580      3.6690  |    0.0000      0.0000
39545>
39546>                                AREA     QPEAK     TPEAK       R.V.
39547>                                (ha)     (cms)     (hrs)       (mm)
39548>    INFLOW : ID= 2 ( 50640)    110.646    11.180      6.17      47.74
39549>    OUTFLOW: ID= 1 (******)    110.646     1.526      7.42      47.70
39550>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
39551>
39552>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
39553>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
39554>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
39555>
39556>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.65
39557>                    TIME SHIFT OF PEAK FLOW          (min)= 75.00
39558>                    MAXIMUM  STORAGE   USED       (ha.m.)=  3.4976
39559>
39560> ------------------------------------------------------------------------------
39561>
39562>   --------------------------
39563>   | Junction Command(30651003) |
39564>   --------------------------
39565>
39566>                            AREA     QPEAK   TPEAK     R.V.
39567>                            (ha)     (cms)    (hrs)     (mm)
39568>   INFLOW : ID= 3(30651001)    0.00     0.00    0.00     0.00
39569>   OUTFLOW: ID= 2(30651003)    0.00     0.00    0.00     0.00
39570>
39571>   ------------------------------------------------------------------------------
39572>
39573> --------------------
39574> | ADD HYD  (******)|
39575> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39576> --------------------         (ha)    (cms)    (hrs)     (mm)
39577> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
39578> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
39579>         ID1= 1 (******):   110.65   1.526     7.42    47.70
39580>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
39581>         ================================================
39582>         ID = 3 (******):   110.65   1.526     7.42    47.70
39583>
39584>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39585> ------------------------------------------------------------------------------
39586>
39587> --------------------
39588> | ADD HYD  (******)|
39589> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
39590> --------------------         (ha)    (cms)    (hrs)     (mm)
39591>         ID1= 3 (******):   110.65   1.526     7.42    47.70
39592>       + ID2= 2 (******):     0.75   0.070     6.08    33.03
39593>         ================================================
39594>         ID = 1 (******):   111.40   1.533     7.42    47.61
39595>
39596>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39597> ------------------------------------------------------------------------------
39598>
39599> --------------------
39600> | ADD HYD  (******)|
39601> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39602> --------------------         (ha)    (cms)    (hrs)     (mm)
39603>         ID1= 1 (******):    11.36   0.808     6.17    33.07
39604>       + ID2= 2 (******):   111.40   1.533     7.42    47.61
39605>         ================================================
39606>         ID = 3 (******):   122.76   1.687     7.08    46.26
39607>
39608>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39609> ------------------------------------------------------------------------------
39610> --------------------
39611> | ROUTE CHN(******)|
39612> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
39613> --------------------
39614>                <------ DATA FOR SECTION (   1.1) ------>
39615>                Distance      Elevation       Manning
39616>                   0.00         447.10        0.0450
39617>                  42.83         446.80        0.0450
39618>                  42.89         446.80        0.0450
39619>                  43.24         446.79        0.0450
39620>                 122.57         446.48        0.0450
39621>                 154.02         446.22        0.0450
39622>                 191.79         446.32    0.0450 /0.0350  Main Channel
39623>                 199.05         442.27        0.0350      Main Channel
39624>                 199.74         442.33        0.0350      Main Channel
39625>                 212.02         444.19        0.0350      Main Channel
39626>                 232.17         444.54    0.0350 /0.0450  Main Channel
39627>                 348.58         444.42        0.0450
39628>                 359.23         444.30        0.0450
39629>                 381.33         444.03        0.0450
39630>                 483.65         444.18        0.0450
39631>                 548.64         445.87        0.0450
39632>
39633>       <---------------------- TRAVEL TIME TABLE ----------------------->
39634>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
39635>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
39636>         0.19   442.46    .184E+03       0.1         0.65      24.29
39637>         0.38   442.65    .662E+03       0.7         1.01      15.64
39638>         0.57   442.84    .143E+04       2.0         1.31      12.09
39639>         0.76   443.03    .247E+04       4.1         1.57      10.05
39640>         0.95   443.22    .381E+04       7.3         1.81       8.70
39641>         1.14   443.41    .543E+04      11.7         2.04       7.73
39642>         1.33   443.60    .733E+04      17.5         2.26       6.99
39643>         1.52   443.79    .952E+04      24.8         2.46       6.41
39644>         1.71   443.98    .120E+05      33.7         2.66       5.93
39645>         1.89   444.16    .211E+05      47.0         2.11       7.49
39646>         2.08   444.35    .469E+05      73.0         1.47      10.71
39647>         2.27   444.54    .855E+05     117.6         1.30      12.12
39648>         2.46   444.73    .140E+06     240.0         1.62       9.75
39649>         2.65   444.92    .197E+06     400.4         1.92       8.20
39650>         2.84   445.11    .255E+06     595.0         2.21       7.13
39651>         3.03   445.30    .314E+06     821.8         2.48       6.37
39652>         3.22   445.49    .374E+06    1079.2         2.73       5.78
39653>         3.41   445.68    .436E+06    1366.3         2.96       5.32
39654>         3.60   445.87    .500E+06    1682.3         3.19       4.95
39655>
39656>                                     <---- hydrograph ---->   <-pipe / channel->
39657>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
39658>                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
39659>    INFLOW : ID= 2 (******)  122.76     1.69    7.08  46.26      0.53      1.23
39660>    OUTFLOW: ID= 1 (******)  122.76     1.67    7.25  46.26      0.52      1.22
39661>
39662>
39663>
39664> ------------------------------------------------------------------------------
39665> --------------------
39666> | CALIB            |
39667> | NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
39668> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
39669> --------------------   U.H. Tp(hrs)=   0.19
39670>
39671>      Unit Hyd Qpeak  (cms)=   0.090
39672>
39673>      PEAK FLOW       (cms)=   0.045 (i)
39674>      TIME TO PEAK    (hrs)=   6.083
39675>      RUNOFF VOLUME    (mm)=  32.997
39676>      TOTAL RAINFALL   (mm)=  62.921
39677>      RUNOFF COEFFICIENT   =   0.524
39678>
39679>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39680>
39681> ------------------------------------------------------------------------------
39682>
39683> --------------------
39684> | ADD HYD  (******)|
39685> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39686> --------------------         (ha)    (cms)    (hrs)     (mm)
39687>         ID1= 1 (******):     0.45   0.045     6.08    33.00
39688>       + ID2= 2 (******):   122.76   1.672     7.25    46.26
39689>         ================================================
39690>         ID = 3 (******):   123.21   1.676     7.25    46.21
39691>
39692>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39693> ------------------------------------------------------------------------------
39694> --------------------
39695> | CALIB            |
39696> | NASHYD   (******)|   Area     (ha)=   2.19   Curve Number   (CN)= 85.0
39697> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
39698> --------------------   U.H. Tp(hrs)=   0.27
39699>
39700>      Unit Hyd Qpeak  (cms)=   0.310
39701>
39702>      PEAK FLOW       (cms)=   0.177 (i)
39703>      TIME TO PEAK    (hrs)=   6.167
39704>      RUNOFF VOLUME    (mm)=  33.054
39705>      TOTAL RAINFALL   (mm)=  62.921
39706>      RUNOFF COEFFICIENT   =   0.525
39707>
39708>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39709>
39710> ------------------------------------------------------------------------------
39711> --------------------
39712> | CALIB            |
39713> | NASHYD   (******)|   Area     (ha)=   0.39   Curve Number   (CN)= 85.0
39714> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
39715> --------------------   U.H. Tp(hrs)=   0.18
39716>
39717>      Unit Hyd Qpeak  (cms)=   0.083
39718>
39719>      PEAK FLOW       (cms)=   0.040 (i)
39720>      TIME TO PEAK    (hrs)=   6.083
39721>      RUNOFF VOLUME    (mm)=  32.978
39722>      TOTAL RAINFALL   (mm)=  62.921
39723>      RUNOFF COEFFICIENT   =   0.524
39724>
39725>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
39726>
39727> ------------------------------------------------------------------------------
39728>
39729> --------------------
39730> | ADD HYD  (******)|
39731> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
39732> --------------------         (ha)    (cms)    (hrs)     (mm)
39733>         ID1= 1 (******):     0.39   0.040     6.08    32.98
39734>       + ID2= 2 (******):     2.19   0.177     6.17    33.05
39735>         ================================================
39736>         ID = 3 (******):     2.58   0.216     6.08    33.04
39737>
39738>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39739> ------------------------------------------------------------------------------
39740>
39741> --------------------
39742> | ADD HYD  (******)|
39743> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
39744> --------------------         (ha)    (cms)    (hrs)     (mm)
39745>         ID1= 3 (******):     2.58   0.216     6.08    33.04
39746>       + ID2= 2 (******):   123.21   1.676     7.25    46.21
39747>         ================================================
39748>         ID = 1 (******):   125.79   1.704     7.17    45.94
39749>
39750>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
39751> ------------------------------------------------------------------------------
39752> --------------------
39753> | ROUTE CHN(******)|
39754> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
39755> --------------------
39756>                <------ DATA FOR SECTION (   1.1) ------>
39757>                Distance      Elevation       Manning
39758>                   0.00         429.12        0.0450
39759>                  37.54         428.86        0.0450
39760>                  53.31         428.70        0.0450
39761>                  81.17         428.24        0.0450
39762>                  99.28         428.15    0.0450 /0.0350  Main Channel
39763>                 114.53         427.72        0.0350      Main Channel
39764>                 119.88         426.51        0.0350      Main Channel
39765>                 124.17         425.84        0.0350      Main Channel
39766>                 206.01         425.90        0.0350      Main Channel
39767>                 209.64         426.51        0.0350      Main Channel
39768>                 214.21         426.89        0.0350      Main Channel
39769>                 231.49         427.17        0.0350      Main Channel
39770>                 268.61         427.89    0.0350 /0.0450  Main Channel
39771>                 351.58         428.15        0.0450
39772>                 368.27         428.31        0.0450
39773>                 405.75         428.52        0.0450
39774>                 416.79         428.59        0.0450
39775>                 440.06         428.76        0.0450
39776>                 469.88         428.97        0.0450
39777>
39778>       <---------------------- TRAVEL TIME TABLE ----------------------->
39779>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
39780>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
```

```
        0.16   426.00    .218E+04       4.1          0.39       8.87
        0.31   426.16    .495E+04      15.8          0.67       5.22
        0.47   426.32    .779E+04      33.2          0.89       3.92
        0.63   426.47    .107E+05      55.4          1.08       3.22
        0.79   426.63    .137E+05      81.8          1.25       2.78
        0.94   426.79    .167E+05     112.4          1.40       2.48
        1.10   426.95    .199E+05     144.6          1.52       2.29
        1.26   427.10    .233E+05     176.4          1.58       2.20
        1.42   427.26    .271E+05     214.5          1.65       2.11
        1.57   427.42    .312E+05     258.4          1.73       2.01
        1.73   427.58    .356E+05     307.7          1.81       1.93
        1.89   427.73    .402E+05     362.0          1.88       1.85
        2.05   427.89    .452E+05     415.1          1.91       1.82
        2.23   428.07    .525E+05     501.3          1.99       1.74
        2.41   428.25    .621E+05     609.1          2.05       1.70
        2.59   428.43    .733E+05     739.1          2.10       1.65
        2.77   428.61    .862E+05     886.8          2.15       1.62
        2.95   428.79    .101E+06    1053.9          2.19       1.59
        3.13   428.97    .116E+06    1240.2          2.22       1.57

                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   125.79     1.70    7.17  45.94      0.07      0.39
   OUTFLOW: ID= 1 (******)   125.79     1.69    7.42  45.94      0.07      0.39


---------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.201 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.059
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        443.75        0.0000
                   8.50        443.74        0.0450
                  35.47        443.64        0.0450
                  64.60        443.29        0.0450
                  74.71        443.18        0.0450
                  80.25        443.17        0.0450
                 112.17        443.12    0.0450 /0.0350  Main Channel
                 131.57        442.76        0.0350      Main Channel
                 137.50        442.66        0.0350      Main Channel
                 137.91        442.67        0.0350      Main Channel
                 152.28        442.24        0.0350      Main Channel
                 167.40        441.39        0.0350      Main Channel
                 178.29        441.56        0.0350      Main Channel
                 216.75        442.01        0.0350      Main Channel
                 221.54        442.05    0.0350 /0.0450  Main Channel
                 334.66        442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.05   441.45    .216E+02        0.0         0.17       16.51
        0.11   441.50    .864E+02        0.1         0.28       10.40
        0.16   441.56    .194E+03        0.4         0.36        7.94
        0.22   441.61    .350E+03        0.9         0.43        6.75
        0.27   441.67    .561E+03        1.6         0.49        5.86
        0.33   441.72    .825E+03        2.6         0.55        5.20
        0.38   441.78    .114E+04        4.1         0.62        4.68
        0.44   441.83    .152E+04        5.9         0.67        4.27
        0.49   441.89    .194E+04        8.2         0.73        3.94
        0.55   441.94    .242E+04       11.0         0.79        3.67
        0.60   442.00    .296E+04       14.3         0.84        3.44
        0.66   442.05    .355E+04       18.1         0.88        3.27
        0.71   442.11    .425E+04       23.6         0.96        3.00
        0.78   442.17    .523E+04       31.0         1.02        2.82
        0.84   442.24    .641E+04       39.6         1.07        2.70
        0.91   442.30    .778E+04       49.3         1.10        2.63
        0.97   442.36    .935E+04       60.5         1.12        2.57
        1.03   442.43    .111E+05       73.5         1.14        2.52
        1.10   442.49    .131E+05       88.2         1.16        2.47

                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    41.38     0.99    6.58  42.73      0.23      0.44
   OUTFLOW: ID= 1 (******)    41.38     0.99    6.67  42.73      0.23      0.44


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.238 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  33.072
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.24   0.238     6.33    33.07
      + ID2= 2 (******):    41.38   0.989     6.67    42.73
        ================================================
        ID = 3 (******):    45.62   1.204     6.50    41.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.59   0.201     6.17    33.06
      + ID2= 2 (******):    45.62   1.204     6.50    41.83
        ================================================
        ID = 3 (******):    48.21   1.356     6.33    41.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        429.12        0.0500
                  37.54        428.86        0.0500
                  53.31        428.70        0.0500
                  81.17        428.24        0.0500
                  99.28        428.15    0.0500 /0.0300  Main Channel
                 114.53        427.72        0.0300      Main Channel
                 119.88        426.51        0.0300      Main Channel
                 124.17        425.84        0.0300      Main Channel
                 206.01        425.90        0.0300      Main Channel
                 209.64        426.51        0.0300      Main Channel
                 214.21        426.89        0.0300      Main Channel
                 231.49        427.17        0.0300      Main Channel
                 268.61        427.89    0.0300 /0.0500  Main Channel
                 351.58        428.15        0.0500
                 368.27        428.31        0.0500
                 405.75        428.52        0.0500
                 416.79        428.59        0.0500
                 440.06        428.76        0.0500
                 469.88        428.97        0.0500

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   426.00    .187E+04       9.2          0.88       3.40
        0.31   426.16    .424E+04      35.4          1.49       2.00
        0.47   426.32    .666E+04      74.1          1.98       1.50
        0.63   426.47    .914E+04     123.7          2.41       1.23
        0.79   426.63    .117E+05     182.8          2.79       1.07
        0.94   426.79    .143E+05     251.2          3.13       0.95
        1.10   426.95    .170E+05     323.1          3.39       0.88
        1.26   427.10    .199E+05     394.0          3.52       0.84
        1.42   427.26    .232E+05     479.1          3.69       0.81
        1.57   427.42    .267E+05     577.3          3.86       0.77
        1.73   427.58    .304E+05     687.4          4.03       0.74
        1.89   427.73    .344E+05     808.6          4.20       0.71
        2.05   427.89    .387E+05     927.4          4.28       0.70
        2.23   428.07    .449E+05    1119.2          4.45       0.67
        2.41   428.25    .531E+05    1356.2          4.56       0.65
        2.59   428.43    .627E+05    1638.9          4.66       0.64
        2.77   428.61    .737E+05    1955.8          4.73       0.63
        2.95   428.79    .859E+05    2310.2          4.79       0.62
        3.13   428.97    .996E+05    2701.5          4.84       0.61

                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    48.21     1.36    6.33  41.36      0.02      0.88
   OUTFLOW: ID= 1 (******)    48.21     1.35    6.42  41.36      0.02      0.88


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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):   125.79    1.693     7.42    45.94
      + ID2= 2 (******):    48.21    1.350     6.42    41.36
        ================================================
        ID = 3 (******):   173.99    2.782     7.08    44.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.98          3.60
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.91          1.12
     Length            (m)=     246.54        157.18
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=      82.92         29.02
                   over (min)       5.00         45.00
     Storage Coeff.  (min)=       5.30 (ii)    40.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00         45.00
     Unit Hyd. peak  (cms)=       0.21          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.10          0.16        1.159 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.58         6.00
     RUNOFF VOLUME    (mm)=      60.92         33.07        49.22
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =      0.97          0.53         0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     8.58   1.159     6.00    49.22
      + ID2= 2 (******):    12.07   0.848     6.67    38.97
        ================================================
        ID = 3 ( 50650):    20.65   1.714     6.00    43.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50650):    20.65   1.714     6.00    43.23
      + ID2= 2 (******):   173.99   2.782     7.08    44.67
        ================================================
        ID = 1 ( 50650):   194.64   3.797     6.67    44.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        129.45        0.0450
                   6.00        129.24        0.0450
                   8.00        128.92        0.0450
                  10.00        128.26        0.0450
                  12.00        127.37        0.0450
                  14.00        126.79        0.0450
                  16.00        126.20        0.0450
                  18.00        125.80        0.0450
                  21.00        125.29        0.0450
                  24.00        124.85        0.0450
                  27.00        124.54        0.0350      Main Channel
                  30.00        124.62        0.0350      Main Channel
                  33.00        124.84    0.0350 /0.0450  Main Channel
                  36.00        125.26        0.0450
                  39.00        125.86        0.0450
                  42.00        126.49        0.0450
                  48.00        128.97        0.0450
                  54.00        129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.26   124.80    .390E+03       0.9          0.76       7.18
        0.51   125.06    .124E+04       4.9          1.29       4.21
        0.77   125.31    .239E+04      12.3          1.67       3.25
        1.03   125.57    .380E+04      23.2          1.99       2.73
        1.28   125.83    .544E+04      37.9          2.27       2.40
        1.54   126.08    .731E+04      56.6          2.52       2.15
        1.80   126.34    .937E+04      79.6          2.77       1.96
        2.05   126.60    .116E+05     107.2          3.01       1.81
        2.31   126.85    .140E+05     139.3          3.25       1.67
        2.57   127.11    .165E+05     175.4          3.47       1.57
```

```
        2.82   127.37    .191E+05     215.7          3.68       1.48
        3.08   127.62    .219E+05     261.1          3.89       1.39
        3.34   127.88    .247E+05     310.7          4.10       1.32
        3.59   128.14    .276E+05     364.3          4.30       1.26
        3.85   128.40    .307E+05     421.6          4.48       1.21
        4.11   128.65    .338E+05     482.7          4.65       1.17
        4.36   128.91    .371E+05     548.1          4.82       1.13
        4.62   129.17    .406E+05     600.9          4.83       1.13
        4.88   129.42    .446E+05     634.1          4.63       1.17

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50650)  194.64     3.80    6.67  44.52      0.44      1.08
   OUTFLOW: ID= 1 ( 60650)  194.64     3.80    6.67  44.52      0.44      1.08


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.06         13.71
     Dep. Storage     (mm)=       2.00          6.10
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     581.73         82.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      82.92         35.79
                   over (min)      10.00         30.00
     Storage Coeff.  (min)=       7.64 (ii)    26.75 (ii)
     Unit Hyd. Tpeak (min)=      10.00         30.00
     Unit Hyd. peak  (cms)=       0.13          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.18          0.68          7.513 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33          6.00
     RUNOFF VOLUME    (mm)=      60.92         27.07         51.44
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.43          0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40670):    50.76   7.513     6.00    51.44
      + ID2= 2 ( 60650):   194.64   3.800     6.67    44.52
        ================================================
        ID = 3 ( 50670):   245.40   9.746     6.00    45.95

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         115.77        0.0450
                 20.00         115.51        0.0450
                 24.00         114.73        0.0450
                 28.00         113.17    0.0450 /0.0350  Main Channel
                 32.00         113.16    0.0350 /0.0450  Main Channel
                 36.00         114.68        0.0450
                 40.00         115.05        0.0450
                 44.00         115.27        0.0450
                 48.00         115.46        0.0450
                 52.00         115.71        0.0450
                 54.00         115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.14   113.30    .275E+03       0.3          0.60      13.60
       0.27   113.43    .612E+03       1.2          0.93       8.76
       0.41   113.57    .996E+03       2.4          1.18       6.88
       0.55   113.71    .143E+04       4.1          1.39       5.85
       0.69   113.84    .191E+04       6.1          1.57       5.18
       0.82   113.98    .244E+04       8.6          1.73       4.70
       0.96   114.12    .301E+04      11.6          1.87       4.34
       1.10   114.26    .363E+04      14.9          2.00       4.06
       1.24   114.39    .430E+04      18.8          2.12       3.82
       1.37   114.53    .502E+04      23.1          2.24       3.63
       1.51   114.67    .579E+04      27.9          2.34       3.46
       1.65   114.81    .664E+04      32.5          2.38       3.41
       1.78   114.94    .763E+04      37.8          2.41       3.36
       1.92   115.08    .878E+04      44.0          2.44       3.33
       2.06   115.22    .101E+05      50.8          2.45       3.31
       2.20   115.35    .117E+05      58.8          2.46       3.30
       2.33   115.49    .134E+05      68.1          2.47       3.29
       2.47   115.63    .157E+05      74.2          2.30       3.53
       2.61   115.77    .188E+05      85.0          2.20       3.69

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50670)  245.40     9.75    6.00  45.95      0.88      1.78
   OUTFLOW: ID= 1 ( 60670)  245.40     9.42    6.08  45.95      0.86      1.76


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.22          4.63
     Dep. Storage     (mm)=       2.00          8.04
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     269.03         47.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=      82.92         45.08
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       4.23 (ii)    16.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.24          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.35          0.32          1.567 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      60.92         27.04         45.71
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.43          0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.119     6.00    39.88
      + ID2= 2 ( 40690):    25.49   2.334     6.00    35.04
        ================================================
        ID = 3 ( 50690):    26.69   2.453     6.00    35.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   256.26  10.245     6.08    45.94
      + ID2= 2 ( 50690):    26.69   2.453     6.00    35.26
        ================================================
        ID = 3 ( 50700):   282.95  12.345     6.00    44.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         109.54        0.0450
                  4.00         108.85        0.0450
                  8.00         108.76        0.0450
                 12.00         108.31        0.0450
                 16.00         107.44        0.0450
                 20.00         107.22        0.0450
                 24.00         107.06        0.0450
                 28.00         107.10        0.0450
                 32.00         107.04        0.0450
                 36.00         106.98        0.0450
                 40.00         106.83        0.0350      Main Channel
                 44.00         106.49        0.0350      Main Channel
                 48.00         106.92    0.0350 /0.0450  Main Channel
                 52.00         107.19        0.0450
                 56.00         107.11        0.0450
                 60.00         107.14        0.0450
                 64.00         107.27        0.0450
                 68.00         107.71        0.0450
                 72.00         108.37        0.0450
                 80.00         109.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.12   106.60    .128E+03       0.1          0.43      35.47
       0.23   106.72    .513E+03       0.4          0.69      22.34
       0.35   106.83    .115E+04       1.1          0.90      17.05
       0.52   107.00    .277E+04       3.6          1.21      12.69
       0.69   107.17    .675E+04       8.9          1.21      12.64
       0.86   107.34    .135E+05      19.9          1.35      11.35
       1.02   107.51    .211E+05      36.3          1.58       9.70
       1.19   107.68    .291E+05      57.8          1.82       8.39
       1.36   107.85    .375E+05      84.0          2.06       7.43
       1.53   108.02    .461E+05     114.5          2.28       6.71
       1.70   108.19    .550E+05     149.1          2.49       6.15
       1.87   108.35    .642E+05     187.4          2.68       5.71
       2.04   108.52    .737E+05     228.8          2.85       5.37
       2.21   108.69    .837E+05     274.1          3.01       5.09
       2.37   108.86    .942E+05     316.2          3.08       4.97
       2.54   109.03    .105E+06     372.6          3.25       4.72
       2.71   109.20    .117E+06     433.4          3.40       4.50
       2.88   109.37    .129E+06     498.6          3.55       4.31
       3.05   109.54    .141E+06     568.2          3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  282.95    12.35    6.00  44.93      0.74      1.25
   OUTFLOW: ID= 1 ( 60700)  282.95     9.65    6.17  44.93      0.70      1.22
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| CALIB             |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n             =     0.015        0.360

     Max.Eff.Inten.(mm/hr)=      82.92        45.94
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.08 (ii)   13.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.27         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.30         0.36          0.604 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      60.92        25.35          32.73
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.40           0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40710):     6.35   0.604     6.00    32.73
     + ID2= 2 ( 60700):   282.95   9.647     6.17    44.93
       ==========================================================
       ID = 3 ( 50710):   289.30  10.046     6.17    44.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n             =     0.015        0.270

     Max.Eff.Inten.(mm/hr)=      82.92        49.02
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       5.02 (ii)    8.63 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.21         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.67         0.40          5.062 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      60.92        28.01          55.54
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.45           0.88

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7080      1.0040
                          0.2890      0.3890   |    0.7750      1.0700
                          0.3270      0.4500   |    0.9210      1.2580
                          0.3600      0.6030   |    1.0000      1.3280
                          0.3900      0.6540   |    1.0820      1.3980
                          0.4190      0.7110   |    1.1670      1.4690
                          0.4450      0.7680   |    1.2550      1.5390
                          0.4700      0.8260   |    1.3460      1.6090
                          0.4960      0.8830   |    1.9470      1.9930
                          0.6450      0.9400   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037      5.062      6.00      55.54
   OUTFLOW: ID= 1 ( 70150)     25.037      0.479      6.58      55.53
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.45
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8453

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  | Junction Command(70151) |
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                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n             =     0.015        0.290

     Max.Eff.Inten.(mm/hr)=      82.92        46.43
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.19 (ii)    8.88 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.24         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.40         0.32          2.720 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      60.92        26.41          52.29
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.42           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.2230      0.3310
                          0.0580      0.0840   |    0.2500      0.3590
                          0.0780      0.1040   |    0.2790      0.3870
                          0.0930      0.1240   |    0.3090      0.4160
                          0.1060      0.1440   |    0.3750      0.4780
                          0.1180      0.1640   |    0.4110      0.5120
                          0.1280      0.1840   |    0.4470      0.5450
                          0.1590      0.2550   |    0.5250      0.6130
                          0.1770      0.2790   |    0.7390      0.9130
                          0.1990      0.3030   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155      2.720      6.00      52.29
   OUTFLOW: ID= 1 ( 70160)     14.155      0.329      6.58      52.27
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.11
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4360

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  --------------------------
  | Junction Command(70161) |
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                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50710):   289.30  10.046     6.17    44.66
     + ID2= 2 ( 70150):    25.04   0.479     6.58    55.53
       ==========================================================
       ID = 3 ( 50730):   314.34  10.496     6.17    45.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   314.34  10.496     6.17    45.53
     + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
       ==========================================================
       ID = 1 ( 50730):   314.34  10.496     6.17    45.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50730):   314.34  10.496     6.17    45.53
     + ID2= 2 ( 70160):    14.15   0.329     6.58    52.27
       ==========================================================
       ID = 3 ( 50730):   328.49  10.802     6.17    45.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   328.49  10.802     6.17    45.82
     + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
       ==========================================================
       ID = 1 ( 50730):   328.49  10.802     6.17    45.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         96.28        0.0450
                   9.00         95.39        0.0450
                  12.00         94.87        0.0450
                  15.00         94.17        0.0450
                  18.00         93.95        0.0450
                  21.00         94.01        0.0450
                  24.00         93.92        0.0450
                  27.00         93.98    0.0450 /0.0350  Main Channel
                  30.00         93.33        0.0350      Main Channel
                  32.00         93.73    0.0350 /0.0450  Main Channel
                  34.00         94.58        0.0450
                  35.00         95.06        0.0450
                  40.00         95.32        0.0450
                  45.00         96.12        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.46    .164E+03       0.0          0.36      89.51
        0.26   93.60    .654E+03       0.2          0.57      56.39
        0.40   93.73    .147E+04       0.6          0.75      43.03
        0.55   93.88    .274E+04       1.4          0.99      32.63
        0.70   94.03    .550E+04       2.8          1.00      32.28
        0.85   94.18    .104E+05       5.8          1.08      29.94
        1.00   94.33    .159E+05      10.1          1.24      26.04
        1.15   94.48    .216E+05      15.6          1.41      22.97
        1.29   94.63    .275E+05      22.2          1.57      20.64
        1.44   94.78    .338E+05      29.9          1.72      18.84
        1.59   94.93    .404E+05      38.6          1.86      17.44
        1.74   95.08    .473E+05      48.0          1.97      16.40
        1.89   95.23    .549E+05      58.1          2.05      15.76
        2.04   95.38    .637E+05      70.1          2.14      15.14
        2.19   95.53    .731E+05      83.0          2.21      14.67
        2.34   95.68    .833E+05      97.5          2.27      14.23
        2.49   95.83    .941E+05     113.5          2.34      13.82
        2.64   95.98    .106E+06     131.2          2.41      13.42
        2.79   96.13    .118E+06     150.7          2.48      13.05

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  328.49    10.80    6.17  45.82      1.01      1.26
   OUTFLOW: ID= 1 ( 60730)  328.49     8.03    6.67  45.82      0.92      1.16

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--------------------
| CALIB             |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
```

```
      Surface Area     (ha)=      56.24        13.19
      Dep. Storage     (mm)=       2.00         5.50
      Average Slope     (%)=       1.70         1.70
      Length            (m)=     680.34        43.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=      82.92        48.88
                over (min)        10.00        15.00
      Storage Coeff.  (min)=       8.08 (ii)   13.00 (ii)
      Unit Hyd. Tpeak (min)=      10.00        15.00
      Unit Hyd. peak  (cms)=       0.13         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=      10.74         1.08        11.668 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08         6.00
      RUNOFF VOLUME    (mm)=      60.92        27.76        54.29
      TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
      RUNOFF COEFFICIENT   =       0.97         0.44         0.86


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
    INFLOW : ID= 2 ( 40770)     69.429    11.668      6.00      54.29
    OUTFLOW: ID= 1 ( 70170)     69.429     1.264      6.75      54.27
    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.84
                    TIME SHIFT OF PEAK FLOW         (min)= 45.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  2.5409

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   | Junction Command(70171) |
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                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)    (mm)
   INFLOW : ID= 3( 70170)    0.00      0.00    0.00     0.00
   OUTFLOW: ID= 2( 70171)    0.00      0.00    0.00     0.00

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 60730):   328.49   8.026     6.67    45.82
      + ID2= 2 ( 70170):    69.43   1.264     6.75    54.27
        ================================================
        ID = 3 ( 50770):   397.92   9.284     6.67    47.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50770):   397.92   9.284     6.67    47.29
      + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50770):   397.92   9.284     6.67    47.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         92.38        0.0450
                   3.00         90.34        0.0450
                   6.00         89.94        0.0450
                   9.00         89.83        0.0450
                  12.00         89.80        0.0450
                  15.00         89.72        0.0450
                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15        0.0350      Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76        0.0450
                  30.00         89.78        0.0450
                  33.00         89.79        0.0450
                  36.00         89.80        0.0450
                  39.00         89.72        0.0450
                  42.00         90.35        0.0450
                  45.00         91.36        0.0450
                  48.00         92.10        0.0450
                  51.00         92.21        0.0450
                  54.00         92.34        0.0450
                  56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.15    89.29    .298E+02        0.0          0.31      13.27
        0.29    89.44    .119E+03        0.2          0.50       8.36
        0.44    89.58    .268E+03        0.7          0.65       6.38
        0.61    89.76    .588E+03        1.9          0.79       5.25
        0.78    89.93    .179E+04        5.1          0.71       5.86
        0.96    90.10    .329E+04       11.4          0.87       4.79
        1.13    90.27    .489E+04       20.2          1.03       4.03
        1.30    90.45    .656E+04       31.5          1.19       3.47
        1.47    90.62    .828E+04       45.0          1.35       3.06
        1.65    90.79    .100E+05       60.5          1.50       2.76
        1.82    90.97    .118E+05       77.9          1.64       2.53
        1.99    91.14    .136E+05       97.1          1.77       2.34
        2.17    91.31    .155E+05      118.1          1.90       2.18
        2.34    91.48    .173E+05      140.6          2.02       2.06
        2.51    91.66    .193E+05      164.7          2.13       1.95
        2.68    91.83    .212E+05      190.5          2.23       1.86
        2.86    92.00    .232E+05      218.0          2.33       1.78
        3.03    92.18    .253E+05      242.7          2.39       1.74
        3.20    92.35    .275E+05      262.6          2.37       1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  397.92     9.28    6.67  47.29      0.90      0.80
   OUTFLOW: ID= 1 ( 60770)  397.92     9.24    6.75  47.29      0.90      0.80


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78        11.79
     Dep. Storage     (mm)=       2.00         8.70
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     404.74        43.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      82.92        40.46
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       6.15 (ii)   19.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.19         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.67         0.66         3.104 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      60.92        24.62        42.77
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.39         0.68


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40780):    24.57   3.104     6.00    42.77
      + ID2= 2 ( 60770):   397.92   9.241     6.75    47.29
        ================================================
        ID = 3 ( 50780):   422.49   9.772     6.67    47.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      82.92        47.59
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       4.73 (ii)   18.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.15         0.20         1.286 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      60.92        28.10        48.71
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.45         0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      82.92        43.31
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       3.93 (ii)    8.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.24         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.05         0.04         1.099 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=      60.92        24.90        57.39
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.40         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40790):     8.18   1.286     6.00    48.71
      + ID2= 2 ( 40800):     5.15   1.099     6.00    57.39
        ================================================
        ID = 3 ( 50795):    13.33   2.385     6.00    52.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7780      0.6570
                          0.0040      0.0150   |    1.1550      0.7720
                          0.0090      0.0810   |    1.5780      0.8930
                          0.0120      0.1550   |    1.9240      0.9870
                          0.0140      0.2370   |    2.4190      1.1190
                          0.0160      0.3260   |    2.9510      1.2560
                          0.0620      0.3720   |    3.5980      1.3270
                          0.2560      0.4700   |    4.5570      1.3990
                          0.5310      0.5740   |    5.7230      1.4730

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
    INFLOW : ID= 2 ( 50795)     13.332     2.385      6.00      52.06
    OUTFLOW: ID= 1 ( 70180)     13.332     0.250      6.67      51.99
    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.49
                    TIME SHIFT OF PEAK FLOW         (min)= 40.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.4670

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   --------------------------
   | Junction Command(70181) |
   --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)    (mm)
   INFLOW : ID= 3( 70180)    0.00      0.00    0.00     0.00
```

```
41005>   OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00
41006>
41007>   ------------------------------------------------------------------------------
41008> --------------------
41009> | CALIB             |
41010> | STANDHYD ( 40805)|   Area    (ha)=   3.57
41011> |ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
41012> --------------------
41013>                              IMPERVIOUS    PERVIOUS (i)
41014>      Surface Area     (ha)=       1.41         2.16
41015>      Dep. Storage     (mm)=       1.00         1.50
41016>      Average Slope     (%)=       1.00         2.00
41017>      Length            (m)=     154.27        40.00
41018>      Mannings n           =      0.013        0.250
41019>
41020>      Max.Eff.Inten.(mm/hr)=      82.92        63.39
41021>                 over (min)        5.00        15.00
41022>      Storage Coeff.  (min)=       3.57 (ii)   12.04 (ii)
41023>      Unit Hyd. Tpeak (min)=       5.00        15.00
41024>      Unit Hyd. peak  (cms)=       0.26         0.09
41025>                                                          *TOTALS*
41026>      PEAK FLOW       (cms)=       0.28         0.24          0.500 (iii)
41027>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
41028>      RUNOFF VOLUME    (mm)=      61.92        36.74          45.47
41029>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
41030>      RUNOFF COEFFICIENT   =       0.98         0.58           0.72
41031>
41032> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
41033>
41034>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41035>           CN*  =  85.0    Ia = Dep. Storage  (Above)
41036>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41037>           THAN THE STORAGE COEFFICIENT.
41038>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41039>
41040> ------------------------------------------------------------------------------
41041>
41042> --------------------
41043> | ADD HYD  ( 50790)|
41044> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
41045> --------------------         (ha)    (cms)    (hrs)     (mm)
41046>        ID1= 1 ( 40805):     3.57   0.500     6.00    45.47
41047>      + ID2= 2 ( 70180):    13.33   0.250     6.67    51.99
41048>        ================================================
41049>        ID = 3 ( 50790):    16.90   0.540     6.00    50.61
41050>
41051>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41052> ------------------------------------------------------------------------------
41053>
41054> --------------------
41055> | ADD HYD  ( 50790)|
41056> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
41057> --------------------         (ha)    (cms)    (hrs)     (mm)
41058> *** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
41059> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
41060>        ID1= 3 ( 50790):    16.90   0.540     6.00    50.61
41061>      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
41062>        ================================================
41063>        ID = 1 ( 50790):    16.90   0.540     6.00    50.61
41064>
41065>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41066> ------------------------------------------------------------------------------
41067>
41068> --------------------
41069> | ADD HYD  ( 50800)|
41070> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
41071> --------------------         (ha)    (cms)    (hrs)     (mm)
41072>        ID1= 1 ( 50780):   422.49   9.772     6.67    47.03
41073>      + ID2= 2 ( 50790):    16.90   0.540     6.00    50.61
41074>        ================================================
41075>        ID = 3 ( 50800):   439.40  10.104     6.67    47.17
41076>
41077>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41078> ------------------------------------------------------------------------------
41079> --------------------
41080> | ROUTE CHN( 60800)|
41081> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
41082> --------------------
41083>                <------ DATA FOR SECTION (   1.1) ------>
41084>                Distance      Elevation       Manning
41085>                    0.00         88.54        0.0450
41086>                    3.00         88.18        0.0450
41087>                    6.00         87.54        0.0450
41088>                    9.00         87.44        0.0450
41089>                   12.00         87.13        0.0450
41090>                   15.00         87.23        0.0450
41091>                   18.00         87.18        0.0450
41092>                   21.00         86.49    0.0450 /0.0350  Main Channel
41093>                   24.00         85.82        0.0350      Main Channel
41094>                   27.00         86.44    0.0350 /0.0450  Main Channel
41095>                   30.00         87.18        0.0450
41096>                   33.00         87.16        0.0450
41097>                   36.00         87.25        0.0450
41098>                   39.00         87.46        0.0450
41099>                   42.00         87.70        0.0450
41100>                   45.00         87.80        0.0450
41101>                   48.00         88.00        0.0450
41102>                   49.00         88.12        0.0450
41103>                   50.00         88.23        0.0450
41104>                   52.00         88.59        0.0450
41105>
41106>       <---------------------- TRAVEL TIME TABLE ---------------------->
41107>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
41108>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
41109>         0.12   85.95    .779E+02       0.0         0.37       48.75
41110>         0.25   86.07    .312E+03       0.2         0.59       30.71
41111>         0.37   86.19    .701E+03       0.5         0.77       23.44
41112>         0.49   86.32    .125E+04       1.1         0.94       19.35
41113>         0.62   86.44    .195E+04       1.9         1.09       16.67
41114>         0.77   86.59    .299E+04       3.8         1.36       13.29
41115>         0.92   86.74    .424E+04       6.2         1.59       11.42
41116>         1.07   86.89    .570E+04       9.3         1.77       10.25
41117>         1.22   87.04    .736E+04      13.0         1.92        9.44
41118>         1.37   87.19    .938E+04      16.8         1.94        9.33
41119>         1.52   87.34    .134E+05      22.9         1.86        9.74
41120>         1.66   87.49    .182E+05      31.1         1.86        9.72
41121>         1.81   87.64    .237E+05      41.6         1.91        9.51
41122>         1.96   87.79    .298E+05      53.9         1.96        9.22
41123>         2.11   87.94    .365E+05      68.9         2.05        8.84
41124>         2.26   88.09    .437E+05      86.5         2.15        8.43
41125>         2.41   88.24    .513E+05     106.2         2.25        8.04
41126>         2.56   88.39    .592E+05     128.2         2.36        7.69
41127>         2.71   88.54    .674E+05     152.5         2.46        7.36
41128>
41129>                                  <---- hydrograph ---->   <-pipe / channel->
41130>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
41131>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
41132>    INFLOW : ID= 2 ( 50800)  439.40    10.10    6.67  47.17      1.10      1.80
41133>    OUTFLOW: ID= 1 ( 60800)  439.40     9.92    6.83  47.17      1.09      1.79
41134>
41135>
41136>
41137> ------------------------------------------------------------------------------
41138> --------------------
41139> | CALIB             |
41140> | STANDHYD ( 40820)|   Area    (ha)=  14.21
41141> |ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
41142> --------------------
41143>                              IMPERVIOUS    PERVIOUS (i)
41144>      Surface Area     (ha)=       2.98        11.23
41145>      Dep. Storage     (mm)=       2.00         9.57
41146>      Average Slope     (%)=       2.30         2.30
41147>      Length            (m)=     307.74        44.00
41148>      Mannings n           =      0.015        0.390
41149>
41150>      Max.Eff.Inten.(mm/hr)=      82.92        37.18
41151>                 over (min)        5.00        20.00
41152>      Storage Coeff.  (min)=       4.59 (ii)   18.49 (ii)
41153>      Unit Hyd. Tpeak (min)=       5.00        20.00
41154>      Unit Hyd. peak  (cms)=       0.23         0.06
41155>                                                          *TOTALS*
41156>      PEAK FLOW       (cms)=       0.41         0.60          0.804 (iii)
41157>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
41158>      RUNOFF VOLUME    (mm)=      60.92        21.64          26.74
41159>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
41160>      RUNOFF COEFFICIENT   =       0.97         0.34           0.42
41161>
41162> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
41163> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
41164>               YOU SHOULD CONSIDER SPLITTING THE AREA.
41165>
41166>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41167>           CN*  =  73.8    Ia = Dep. Storage  (Above)
41168>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41169>           THAN THE STORAGE COEFFICIENT.
41170>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41171>
41172> ------------------------------------------------------------------------------
41173>
41174> --------------------
41175> | ADD HYD  ( 50820)|
41176> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
41177> --------------------         (ha)    (cms)    (hrs)     (mm)
41178>        ID1= 1 ( 40820):    14.21   0.804     6.00    26.74
41179>      + ID2= 2 ( 60800):   439.40   9.918     6.83    47.17
41180>        ================================================
41181>        ID = 3 ( 50820):   453.60  10.169     6.75    46.53
41182>
41183>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41184> ------------------------------------------------------------------------------
41185>
41186> --------------------
41187> | ADD HYD  ( 50830)|
41188> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
41189> --------------------         (ha)    (cms)    (hrs)     (mm)
41190>        ID1= 1 ( 50500):  1213.24  37.317     6.92    41.92
41191>      + ID2= 2 ( 50820):   453.60  10.169     6.75    46.53
41192>        ================================================
41193>        ID = 3 ( 50830):  1666.84  47.396     6.92    43.17
41194>
41195>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41196> ------------------------------------------------------------------------------
41197> --------------------
41198> | ROUTE CHN( 60830)|
41199> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
41200> --------------------
41201>                <------ DATA FOR SECTION (   1.1) ------>
41202>                Distance      Elevation       Manning
41203>                    0.00         82.12        0.0450
41204>                   20.00         81.53        0.0450
41205>                   24.00         81.26        0.0450
41206>                   28.00         81.27        0.0450
41207>                   32.00         80.34    0.0450 /0.0350  Main Channel
41208>                   36.00         79.95        0.0350      Main Channel
41209>                   40.00         80.78        0.0450
41210>                   44.00         81.45        0.0450
41211>                   48.00         81.53        0.0450
41212>                   52.00         81.49        0.0450
41213>                   56.00         81.51        0.0450
41214>                   60.00         81.58        0.0450
41215>                   64.00         81.58        0.0450
41216>                   68.00         81.61        0.0450
41217>                   72.00         81.75        0.0450
41218>                   80.00         82.07        0.0450
41219>
41220>       <---------------------- TRAVEL TIME TABLE ---------------------->
41221>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
41222>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
41223>         0.10   80.05    .555E+01       0.0         0.24       5.45
41224>         0.19   80.14    .222E+02       0.1         0.38       3.43
41225>         0.29   80.24    .499E+02       0.3         0.50       2.62
41226>         0.39   80.34    .888E+02       0.7         0.60       2.16
41227>         0.50   80.45    .146E+03       1.4         0.77       1.68
41228>         0.62   80.57    .213E+03       2.5         0.91       1.43
41229>         0.73   80.68    .290E+03       3.8         1.02       1.27
41230>         0.85   80.80    .375E+03       5.4         1.13       1.15
41231>         0.96   80.91    .471E+03       7.6         1.26       1.03
41232>         1.08   81.03    .578E+03      10.1         1.37       0.95
41233>         1.19   81.14    .695E+03      13.0         1.46       0.89
41234>         1.31   81.26    .823E+03      16.2         1.53       0.85
41235>         1.43   81.37    .100E+04      19.7         1.53       0.85
41236>         1.54   81.49    .121E+04      24.1         1.56       0.84
41237>         1.66   81.60    .155E+04      29.0         1.46       0.89
41238>         1.77   81.72    .204E+04      36.4         1.39       0.93
41239>         1.89   81.84    .259E+04      45.6         1.38       0.95
41240>         2.00   81.95    .320E+04      56.7         1.38       0.94
41241>         2.12   82.07    .387E+04      69.6         1.40       0.93
41242>
41243>                                  <---- hydrograph ---->   <-pipe / channel->
41244>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
41245>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
41246>    INFLOW : ID= 2 ( 50830) 1666.84    47.40    6.92  43.17      1.91      1.38
41247>    OUTFLOW: ID= 1 ( 60830) 1666.84    47.38    6.92  43.17      1.91      1.38
41248>
41249>
41250>
41251> ------------------------------------------------------------------------------
41252> --------------------
41253> | CALIB             |
41254> | STANDHYD ( 40830)|   Area    (ha)=  45.51
41255> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
41256> --------------------
41257>                              IMPERVIOUS    PERVIOUS (i)
41258>      Surface Area     (ha)=      30.36        15.15
41259>      Dep. Storage     (mm)=       2.00         5.54
41260>      Average Slope     (%)=       1.30         1.30
41261>      Length            (m)=     550.83        40.00
41262>      Mannings n           =      0.015        0.270
41263>
41264>      Max.Eff.Inten.(mm/hr)=      82.92        73.85
41265>                 over (min)       10.00        20.00
41266>      Storage Coeff.  (min)=       7.72 (ii)   17.22 (ii)
41267>      Unit Hyd. Tpeak (min)=      10.00        20.00
41268>      Unit Hyd. peak  (cms)=       0.13         0.06
41269>                                                          *TOTALS*
41270>      PEAK FLOW       (cms)=       4.77         1.60          5.896 (iii)
41271>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
41272>      RUNOFF VOLUME    (mm)=      60.92        31.98          47.45
41273>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
41274>      RUNOFF COEFFICIENT   =       0.97         0.51           0.75
41275>
41276>
41277>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41278>           CN*  =  78.5    Ia = Dep. Storage  (Above)
41279>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41280>           THAN THE STORAGE COEFFICIENT.
41281>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41282>
41283> ------------------------------------------------------------------------------
41284> --------------------
41285> | CALIB             |
41286> | STANDHYD ( 40840)|   Area    (ha)=   2.04
41287> |ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
41288> --------------------
41289>                              IMPERVIOUS    PERVIOUS (i)
41290>      Surface Area     (ha)=       0.45         1.59
41291>      Dep. Storage     (mm)=       2.00         9.61
41292>      Average Slope     (%)=       3.20         3.20
41293>      Length            (m)=     116.69        69.00
41294>      Mannings n           =      0.015        0.370
41295>
41296>      Max.Eff.Inten.(mm/hr)=      82.92        31.37
41297>                 over (min)        5.00        20.00
41298>      Storage Coeff.  (min)=       2.32 (ii)   19.42 (ii)
41299>      Unit Hyd. Tpeak (min)=       5.00        20.00
41300>      Unit Hyd. peak  (cms)=       0.30         0.06
41301>                                                          *TOTALS*
41302>      PEAK FLOW       (cms)=       0.07         0.09          0.124 (iii)
41303>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
41304>      RUNOFF VOLUME    (mm)=      60.92        22.50          28.05
41305>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
41306>      RUNOFF COEFFICIENT   =       0.97         0.36           0.45
41307>
41308> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
41309> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
41310>               YOU SHOULD CONSIDER SPLITTING THE AREA.
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41311>
41312>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41313>             CN*  =  75.2    Ia = Dep. Storage  (Above)
41314>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41315>            THAN THE STORAGE COEFFICIENT.
41316>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41317>
41318> --------------------------------------------------------------------------------
41319>
41320> --------------------
41321> | ADD HYD  ( 50840)|
41322> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
41323> --------------------         (ha)    (cms)    (hrs)     (mm)
41324>        ID1= 1 ( 40830):    45.51   5.896     6.00    47.45
41325>      + ID2= 2 ( 40840):     2.04   0.124     6.00    28.05
41326>        ====================================================
41327>        ID = 3 ( 50840):    47.56   6.020     6.00    46.61
41328>
41329>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41330> --------------------------------------------------------------------------------
41331>
41332> --------------------
41333> | ADD HYD  ( 50840)|
41334> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
41335> --------------------         (ha)    (cms)    (hrs)     (mm)
41336>        ID1= 3 ( 50840):    47.56   6.020     6.00    46.61
41337>      + ID2= 2 ( 60830):  1666.84  47.381     6.92    43.17
41338>        ====================================================
41339>        ID = 1 ( 50840):  1714.40  48.237     6.83    43.27
41340>
41341>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41342> --------------------------------------------------------------------------------
41343> --------------------
41344> | ROUTE CHN( 60840)|
41345> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
41346> --------------------
41347>               <------ DATA FOR SECTION (   1.1) ------>
41348>               Distance      Elevation       Manning
41349>                   0.00         82.18        0.0450
41350>                  32.00         79.04        0.0450
41351>                  40.00         78.76        0.0450
41352>                  48.00         78.58        0.0450
41353>                  56.00         78.21        0.0450
41354>                  64.00         76.89        0.0350      Main Channel
41355>                  72.00         78.08        0.0450
41356>                  80.00         79.44        0.0450
41357>                  88.00         80.28        0.0450
41358>                  96.00         80.92        0.0450
41359>                 104.00         81.29        0.0450
41360>                 112.00         81.62        0.0450
41361>                 120.00         81.76        0.0450
41362>                 128.00         81.81        0.0450
41363>                 140.00         82.02        0.0450
41364>
41365>       <--------------------- TRAVEL TIME TABLE ---------------------->
41366>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
41367>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
41368>         0.27    77.16    .320E+03        0.2         0.48      24.00
41369>         0.54    77.43    .128E+04        1.4         0.75      15.12
41370>         0.81    77.70    .288E+04        4.2         0.99      11.54
41371>         1.08    77.97    .512E+04        9.0         1.20       9.53
41372>         1.35    78.24    .799E+04       16.6         1.42       8.02
41373>         1.62    78.51    .119E+05       26.9         1.54       7.40
41374>         1.89    78.78    .176E+05       41.0         1.59       7.15
41375>         2.16    79.05    .252E+05       62.9         1.71       6.68
41376>         2.43    79.32    .341E+05       93.9         1.89       6.05
41377>         2.70    79.59    .438E+05      131.1         2.05       5.56
41378>         2.97    79.86    .544E+05      175.1         2.20       5.18
41379>         3.24    80.13    .660E+05      226.4         2.35       4.86
41380>         3.51    80.40    .787E+05      284.9         2.48       4.60
41381>         3.77    80.67    .924E+05      351.1         2.60       4.39
41382>         4.04    80.94    .107E+06      425.7         2.72       4.20
41383>         4.31    81.21    .124E+06      507.1         2.81       4.06
41384>         4.58    81.48    .141E+06      598.4         2.90       3.94
41385>         4.85    81.75    .161E+06      695.9         2.96       3.86
41386>         5.12    82.02    .185E+06      800.9         2.97       3.85
41387>
41388>                                    <---- hydrograph ---->   <-pipe / channel->
41389>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
41390>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
41391>    INFLOW : ID= 2 ( 50840) 1714.40    48.24     6.83   43.27      1.98      1.63
41392>    OUTFLOW: ID= 1 ( 60840) 1714.40    47.99     7.00   43.27      1.97      1.63
41393>
41394>
41395>
41396> --------------------------------------------------------------------------------
41397> --------------------
41398> | CALIB            |
41399> | STANDHYD ( 40850)|   Area    (ha)=  26.33
41400> |ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
41401> --------------------
41402>                              IMPERVIOUS    PERVIOUS (i)
41403>      Surface Area     (ha)=       8.14         18.19
41404>      Dep. Storage     (mm)=       2.00          7.29
41405>      Average Slope     (%)=       2.00          2.00
41406>      Length            (m)=     418.93        142.00
41407>      Mannings n           =      0.015         0.310
41408>
41409>      Max.Eff.Inten.(mm/hr)=      82.92         26.66
41410>                    over (min)        5.00         35.00
41411>      Storage Coeff.  (min)=       5.76 (ii)    34.90 (ii)
41412>      Unit Hyd. Tpeak (min)=       5.00         35.00
41413>      Unit Hyd. peak  (cms)=       0.20          0.03
41414>                                                      *TOTALS*
41415>      PEAK FLOW       (cms)=       1.42          0.76         1.727 (iii)
41416>      TIME TO PEAK    (hrs)=       6.00          6.50          6.00
41417>      RUNOFF VOLUME    (mm)=      60.92         25.58         34.28
41418>      TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
41419>      RUNOFF COEFFICIENT   =       0.97          0.41          0.54
41420>
41421>
41422>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41423>             CN*  =  77.5    Ia = Dep. Storage  (Above)
41424>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41425>            THAN THE STORAGE COEFFICIENT.
41426>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41427>
41428> --------------------------------------------------------------------------------
41429>
41430> --------------------
41431> | ADD HYD  ( 50850)|
41432> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
41433> --------------------         (ha)    (cms)    (hrs)     (mm)
41434>        ID1= 1 ( 40850):    26.33   1.727     6.00    34.28
41435>      + ID2= 2 ( 60840):  1714.40  47.991     7.00    43.27
41436>        ====================================================
41437>        ID = 3 ( 50850):  1740.72  48.566     7.00    43.13
41438>
41439>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41440> --------------------------------------------------------------------------------
41441> --------------------
41442> | CALIB            |
41443> | STANDHYD ( 40880)|   Area    (ha)=  56.14
41444> |ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
41445> --------------------
41446>                              IMPERVIOUS    PERVIOUS (i)
41447>      Surface Area     (ha)=      20.77         35.37
41448>      Dep. Storage     (mm)=       2.00          8.79
41449>      Average Slope     (%)=       1.30          1.30
41450>      Length            (m)=     611.77        120.00
41451>      Mannings n           =      0.015         0.330
41452>
41453>      Max.Eff.Inten.(mm/hr)=      82.92         23.15
41454>                    over (min)       10.00         45.00
41455>      Storage Coeff.  (min)=       8.22 (ii)    41.15 (ii)
41456>      Unit Hyd. Tpeak (min)=      10.00         45.00
41457>      Unit Hyd. peak  (cms)=       0.13          0.03
41458>                                                      *TOTALS*
41459>      PEAK FLOW       (cms)=       3.67          1.26         4.051 (iii)
41460>      TIME TO PEAK    (hrs)=       6.00          6.67          6.00
41461>      RUNOFF VOLUME    (mm)=      60.92         25.73         37.70
41462>      TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
41463>      RUNOFF COEFFICIENT   =       0.97          0.41          0.60
41464>
41465>
41466>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41467>             CN*  =  79.9    Ia = Dep. Storage  (Above)
41468>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41469>            THAN THE STORAGE COEFFICIENT.
41470>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41471>
41472> --------------------------------------------------------------------------------
41473> --------------------
41474> | ROUTE CHN( 60880)|
41475> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
41476> --------------------
41477>               <------ DATA FOR SECTION (   1.1) ------>
41478>               Distance      Elevation       Manning
41479>                   0.00         85.55        0.0450
41480>                  24.00         85.23        0.0450
41481>                  28.00         85.17        0.0450
41482>                  32.00         85.07        0.0450
41483>                  36.00         84.96        0.0350      Main Channel
41484>                  40.00         84.96        0.0350      Main Channel
41485>                  44.00         85.00    0.0350 /0.0450  Main Channel
41486>                  48.00         85.03        0.0450
41487>                  52.00         85.18        0.0450
41488>                  56.00         85.22        0.0450
41489>                  60.00         85.31        0.0450
41490>                  64.00         85.33        0.0450
41491>                  68.00         85.38        0.0450
41492>                  80.00         85.59        0.0450
41493>
41494>       <--------------------- TRAVEL TIME TABLE ---------------------->
41495>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
41496>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
41497>         0.01    84.96    .992E+01        0.0         0.05     238.32
41498>         0.04    84.99    .159E+03        0.0         0.21      57.53
41499>         0.07    85.03    .408E+03        0.2         0.32      38.32
41500>         0.10    85.06    .751E+03        0.4         0.40      30.54
41501>         0.13    85.09    .114E+04        0.7         0.47      25.77
41502>         0.16    85.12    .158E+04        1.2         0.53      22.66
41503>         0.19    85.15    .206E+04        1.7         0.59      20.45
41504>         0.22    85.18    .259E+04        2.3         0.64      18.91
41505>         0.25    85.21    .321E+04        3.0         0.67      18.12
41506>         0.29    85.24    .393E+04        3.8         0.70      17.32
41507>         0.32    85.27    .473E+04        4.8         0.73      16.56
41508>         0.35    85.30    .562E+04        5.9         0.76      15.89
41509>         0.38    85.34    .663E+04        7.0         0.77      15.69
41510>         0.41    85.37    .777E+04        8.5         0.80      15.20
41511>         0.44    85.40    .902E+04       10.2         0.82      14.69
41512>         0.47    85.43    .104E+05       12.2         0.85      14.19
41513>         0.50    85.46    .118E+05       14.3         0.88      13.73
41514>         0.53    85.49    .133E+05       16.7         0.91      13.31
41515>         0.56    85.52    .150E+05       19.3         0.94      12.91
41516>
41517>                                    <---- hydrograph ---->   <-pipe / channel->
41518>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
41519>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
41520>    INFLOW : ID= 2 ( 40880)   56.14     4.05     6.00   37.70      0.29      0.71
41521>    OUTFLOW: ID= 1 ( 60880)   56.14     2.76     6.17   37.67      0.25      0.66
41522>
41523>
41524>
41525> --------------------------------------------------------------------------------
41526> --------------------
41527> | ROUTEPIPE( 80880)|     PIPE Number     =   1.00
41528> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
41529> | DT=  5.0 min     |     Length        (m)= 888.03
41530> --------------------     Slope       (m/m)=  0.004
41531>                          Manning n        =  0.013
41532>
41533>       <----------------- TRAVEL TIME TABLE ------------------->
41534>         DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
41535>           (m)      (cu.m.)      (cms)        (m/s)        min
41536>          0.10    .213E+03        0.2         0.93        15.91
41537>          0.20    .426E+03        0.7         1.41        10.53
41538>          0.30    .639E+03        1.3         1.76         8.42
41539>          0.40    .853E+03        2.0         2.04         7.25
41540>          0.50    .107E+04        2.7         2.27         6.51
41541>          0.60    .128E+04        3.6         2.47         5.99
41542>          0.70    .149E+04        4.4         2.64         5.60
41543>          0.80    .171E+04        5.4         2.79         5.30
41544>          0.90    .192E+04        6.3         2.92         5.06
41545>          1.00    .213E+04        7.3         3.04         4.87
41546>          1.10    .234E+04        8.3         3.15         4.71
41547>          1.20    .256E+04        9.3         3.24         4.57
41548>          1.30    .277E+04       10.4         3.33         4.45
41549>          1.40    .298E+04       11.4         3.40         4.35
41550>          1.50    .320E+04       12.5         3.48         4.26
41551>          1.60    .341E+04       13.6         3.54         4.18
41552>          1.70    .362E+04       14.7         3.60         4.11
41553>          1.80    .384E+04       15.8         3.66         4.05
41554>          1.90    .405E+04       16.9         3.71         3.99
41555>                                    <---- hydrograph ---->   <-pipe / channel->
41556>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
41557>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
41558>    INFLOW : ID= 2 ( 60880)   56.14     2.76     6.17   37.67      0.50      2.28
41559>    OUTFLOW: ID= 1 ( 80880)   56.14     2.63     6.25   37.67      0.49      2.24
41560>
41561>
41562>
41563> --------------------------------------------------------------------------------
41564> --------------------
41565> | CALIB            |
41566> | STANDHYD ( 40890)|   Area    (ha)=  41.71
41567> |ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
41568> --------------------
41569>                              IMPERVIOUS    PERVIOUS (i)
41570>      Surface Area     (ha)=      18.24         23.47
41571>      Dep. Storage     (mm)=       2.00          8.20
41572>      Average Slope     (%)=       1.10          1.10
41573>      Length            (m)=     527.32         85.00
41574>      Mannings n           =      0.015         0.350
41575>
41576>      Max.Eff.Inten.(mm/hr)=      82.92         28.64
41577>                    over (min)       10.00         35.00
41578>      Storage Coeff.  (min)=       7.91 (ii)    34.69 (ii)
41579>      Unit Hyd. Tpeak (min)=      10.00         35.00
41580>      Unit Hyd. peak  (cms)=       0.13          0.03
41581>                                                      *TOTALS*
41582>      PEAK FLOW       (cms)=       2.67          1.06         3.091 (iii)
41583>      TIME TO PEAK    (hrs)=       6.00          6.50          6.00
41584>      RUNOFF VOLUME    (mm)=      60.92         25.18         36.92
41585>      TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
41586>      RUNOFF COEFFICIENT   =       0.97          0.40          0.59
41587>
41588>
41589>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41590>             CN*  =  75.6    Ia = Dep. Storage  (Above)
41591>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41592>            THAN THE STORAGE COEFFICIENT.
41593>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41594>
41595> --------------------------------------------------------------------------------
41596> --------------------
41597> | CALIB            |
41598> | STANDHYD ( 40900)|   Area    (ha)=  13.56
41599> |ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
41600> --------------------
41601>                              IMPERVIOUS    PERVIOUS (i)
41602>      Surface Area     (ha)=       8.41          5.15
41603>      Dep. Storage     (mm)=       1.00          7.00
41604>      Average Slope     (%)=       1.00          2.00
41605>      Length            (m)=     300.67         43.00
41606>      Mannings n           =      0.015         0.310
41607>
41608>      Max.Eff.Inten.(mm/hr)=      82.92         69.74
41609>                    over (min)        5.00         20.00
41610>      Storage Coeff.  (min)=       5.81 (ii)    15.49 (ii)
41611>      Unit Hyd. Tpeak (min)=       5.00         20.00
41612>      Unit Hyd. peak  (cms)=       0.20          0.07
41613>                                                      *TOTALS*
41614>      PEAK FLOW       (cms)=       1.42          0.53         1.800 (iii)
41615>      TIME TO PEAK    (hrs)=       6.00          6.17          6.00
41616>      RUNOFF VOLUME    (mm)=      61.92         30.48         45.57
```

```
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.98         0.48           0.72

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------      (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):  13.56      1.80      6.00   45.57
      ==================================================
      MAJOR SYS.(ID= 2):   1.30      0.84      6.00   45.57
      MINOR SYS.(ID= 3):  12.26      0.96      5.83   45.57

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71   3.091     6.00    36.92
      + ID2= 2 ( 50850):  1740.72  48.566     7.00    43.13
        ==================================================
        ID = 3 ( 50890):  1782.43  49.503     6.92    42.99

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1782.43  49.503     6.92    42.99
      + ID2= 2 ( 80880):    56.14   2.634     6.25    37.67
        ==================================================
        ID = 1 ( 50890):  1838.57  51.277     6.92    42.83

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  1838.57  51.277     6.92    42.83
      + ID2= 2 ( 90020):    12.26   0.960     5.83    45.57
        ==================================================
        ID = 3 ( 50890):  1850.83  51.498     6.92    42.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00          79.05        0.0450
                   2.00          78.40        0.0450
                   4.00          77.75        0.0450
                   6.00          77.16        0.0450
                   8.00          76.78        0.0450
                  10.00          76.65        0.0450
                  12.00          76.60        0.0450
                  14.00          76.58        0.0450
                  16.00          76.08        0.0450
                  18.00          75.49    0.0450 /0.0350  Main Channel
                  20.00          75.46        0.0350      Main Channel
                  22.00          75.52    0.0350 /0.0450  Main Channel
                  24.00          76.15        0.0450
                  26.00          76.44        0.0450
                  28.00          76.56        0.0450
                  30.00          76.68        0.0450
                  32.00          76.86        0.0450
                  34.00          77.01        0.0450
                  36.00          77.10        0.0450
                  40.00          79.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.03    75.49    .127E+02       0.0         0.14       32.03
       0.22    75.68    .231E+03       0.6         0.69        6.29
       0.40    75.87    .510E+03       2.0         1.01        4.28
       0.59    76.05    .849E+03       4.1         1.25        3.45
       0.78    76.24    .125E+04       6.9         1.43        3.02
       0.97    76.43    .175E+04      10.6         1.57        2.75
       1.15    76.62    .240E+04      14.6         1.57        2.75
       1.34    76.80    .343E+04      21.1         1.60        2.71
       1.53    76.99    .465E+04      30.1         1.68        2.58
       1.71    77.18    .605E+04      41.3         1.77        2.44
       1.90    77.36    .754E+04      55.7         1.92        2.26
       2.09    77.55    .908E+04      72.1         2.06        2.10
       2.27    77.74    .107E+05      90.6         2.20        1.96
       2.46    77.92    .123E+05     111.1         2.34        1.84
       2.65    78.11    .140E+05     133.5         2.48        1.74
       2.84    78.30    .157E+05     157.9         2.61        1.66
       3.02    78.49    .175E+05     184.1         2.73        1.58
       3.21    78.67    .193E+05     212.1         2.85        1.52
       3.40    78.86    .211E+05     242.1         2.97        1.46

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1850.83    51.50    6.92  42.84      1.85      1.87
   OUTFLOW: ID= 1 ( 60900) 1850.83    51.49    6.92  42.84      1.85      1.87


--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77         2.15
     Dep. Storage     (mm)=       2.00         7.07
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     214.73        44.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      82.92        83.23
                  over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.05 (ii)   13.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.24         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.83         0.30         1.093 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      60.92        32.97         47.76
     TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
     RUNOFF COEFFICIENT   =       0.97         0.52          0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92   1.093     6.00    47.76
      + ID2= 2 ( 60900):  1850.83  51.491     6.92    42.84
        ==================================================
        ID = 3 ( 50910):  1857.75  51.593     6.92    42.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.022 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.882
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.523

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.36

     Unit Hyd Qpeak  (cms)=   1.897

     PEAK FLOW       (cms)=   1.194 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  33.068
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.044 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  32.997
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.524

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    17.88   1.194     6.25    33.07
      + ID2= 2 (******):     0.44   0.044     6.08    33.00
        ==================================================
        ID = 3 (******):    18.32   1.222     6.25    33.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.070

     PEAK FLOW       (cms)=   0.034 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  32.978
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.524

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   1.207

     PEAK FLOW       (cms)=   0.678 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.048
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.33   0.034     6.08    32.98
      + ID2= 2 (******):     7.90   0.678     6.08    33.05
        ==================================================
        ID = 3 (******):     8.23   0.712     6.08    33.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.19   0.022     6.00    32.88
      + ID2= 2 (******):    18.32   1.222     6.25    33.07
        ==================================================
        ID = 3 (******):    18.51   1.232     6.17    33.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    18.51   1.232     6.17    33.06
      + ID2= 2 (******):     8.23   0.712     6.08    33.05
        ==================================================
        ID = 1 (******):    26.74   1.918     6.17    33.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
```

```
      Average Slope     (%)=       1.70         1.00
      Length            (m)=      78.30         0.00
      Mannings n            =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      82.92        54.89
                    over (min)        5.00         5.00
      Storage Coeff.  (min)=       2.03 (ii)    2.03 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.31         0.31
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.33         0.01          1.343 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
      RUNOFF VOLUME    (mm)=      60.92        33.07         60.64
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.53          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     5.85   1.343     6.00    60.64
      + ID2= 2 (******):     0.00   0.000     6.67    42.15
        ================================================
        ID = 3 (******):     5.85   1.343     6.00    60.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.00   0.000     6.00    55.27
      + ID2= 2 (******):     0.00   0.000     6.67    42.15
        ================================================
        ID = 3 (******):     0.00   0.000     6.67    42.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     0.00   0.000     6.67    42.47
      + ID2= 2 (******):     5.85   1.343     6.00    60.64
        ================================================
        ID = 1 (******):     5.85   1.343     6.00    60.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         426.51        0.0450
                  0.98         426.14        0.0350      Main Channel
                  2.04         426.14        0.0350      Main Channel
                 20.51         426.51        0.0350      Main Channel

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   426.14    .579E+00       0.0          0.03     191.52
        0.02   426.16    .114E+02       0.0          0.14      39.52
        0.04   426.18    .285E+02       0.0          0.19      27.56
        0.06   426.20    .520E+02       0.0          0.24      22.17
        0.08   426.22    .818E+02       0.1          0.28      18.92
        0.10   426.24    .118E+03       0.1          0.32      16.68
        0.12   426.26    .161E+03       0.2          0.36      15.02
        0.14   426.27    .210E+03       0.3          0.39      13.73
        0.16   426.29    .265E+03       0.3          0.42      12.69
        0.18   426.31    .326E+03       0.5          0.45      11.82
        0.20   426.33    .394E+03       0.6          0.48      11.10
        0.22   426.35    .469E+03       0.7          0.51      10.47
        0.24   426.37    .549E+03       0.9          0.54       9.93
        0.26   426.39    .637E+03       1.1          0.56       9.46
        0.28   426.41    .730E+03       1.3          0.59       9.03
        0.30   426.43    .830E+03       1.6          0.62       8.65
        0.32   426.45    .936E+03       1.9          0.64       8.31
        0.34   426.47    .105E+04       2.2          0.67       8.01
        0.35   426.49    .117E+04       2.5          0.69       7.72

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)  5.85     1.34    6.00  60.63      0.28      0.59
   OUTFLOW: ID= 1 (******)  5.85     1.15    6.00  60.63      0.26      0.57


--------------------------------------------------------------------------------

--------------------
| ROUTEPIPE(******)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
| DT=  5.0 min     |     Length        (m)= 372.00
--------------------     Slope       (m/m)=  0.004
                         Manning n       =  0.013

      <------------------ TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)      (cu.m.)      (cms)        (m/s)        min
        0.05     .423E+02       0.1          0.58        10.67
        0.09     .846E+02       0.2          0.90         6.89
        0.14     .127E+03       0.4          1.15         5.39
        0.19     .169E+03       0.6          1.36         4.55
        0.24     .211E+03       0.9          1.55         4.01
        0.28     .254E+03       1.2          1.71         3.63
        0.33     .296E+03       1.5          1.85         3.34
        0.38     .338E+03       1.8          1.99         3.12
        0.43     .381E+03       2.2          2.11         2.94
        0.47     .423E+03       2.5          2.22         2.80
        0.52     .465E+03       2.9          2.32         2.67
        0.57     .507E+03       3.3          2.41         2.57
        0.62     .550E+03       3.7          2.50         2.48
        0.66     .592E+03       4.1          2.58         2.40
        0.71     .634E+03       4.5          2.66         2.33
        0.76     .677E+03       5.0          2.73         2.27
        0.81     .719E+03       5.4          2.80         2.21
        0.85     .761E+03       5.9          2.86         2.17
        0.90     .804E+03       6.3          2.92         2.12
                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)  4.11     0.85    6.00  55.27      0.23      1.52
   OUTFLOW: ID= 1 (******)  4.11     0.83    6.00  55.27      0.23      1.50


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.11   0.831     6.00    55.27
      + ID2= 2 (******):    26.74   1.918     6.17    33.06
        ================================================
        ID = 3 (******):    30.85   2.452     6.08    36.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    30.85   2.452     6.08    36.02
      + ID2= 2 (******):     5.85   1.146     6.00    60.63
        ================================================
        ID = 1 (******):    36.70   3.486     6.00    39.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         418.26        0.0450
                 40.58         417.27        0.0450
                 68.64         416.80        0.0450
                140.74         415.56        0.0450
                163.74         415.03    0.0450 /0.0350  Main Channel
                211.93         413.30        0.0350      Main Channel
                250.43         411.92        0.0350      Main Channel
                258.86         411.77        0.0350      Main Channel
                276.07         411.80        0.0350      Main Channel
                290.03         411.70        0.0350      Main Channel
                294.99         411.74        0.0350      Main Channel
                298.74         411.97        0.0350      Main Channel
                309.80         412.64        0.0350      Main Channel
                321.40         413.39        0.0350      Main Channel
                332.67         415.03    0.0350 /0.0450  Main Channel
                344.47         416.63        0.0450
                360.44         418.31        0.0450
                381.73         419.43        0.0450
                385.80         419.95        0.0450
                389.30         420.75        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.33   412.03    .115E+05      14.5          1.18      13.21
        0.67   412.36    .302E+05      61.5          1.91       8.18
        1.00   412.70    .535E+05     139.9          2.46       6.38
        1.33   413.03    .814E+05     252.5          2.91       5.37
        1.66   413.36    .114E+06     402.0          3.32       4.72
        2.00   413.70    .150E+06     597.3          3.74       4.19
        2.33   414.03    .190E+06     834.3          4.12       3.80
        2.66   414.36    .234E+06    1114.3          4.47       3.50
        2.99   414.69    .281E+06    1439.4          4.80       3.26
        3.33   415.03    .332E+06    1811.8          5.12       3.06
        3.69   415.39    .393E+06    2361.5          5.65       2.77
        4.05   415.75    .459E+06    2978.2          6.10       2.57
        4.41   416.10    .533E+06    3668.2          6.46       2.42
        4.76   416.46    .615E+06    4437.5          6.78       2.31
        5.12   416.82    .705E+06    5290.7          7.05       2.22
        5.48   417.18    .804E+06    6232.2          7.29       2.15
        5.84   417.54    .910E+06    7276.0          7.51       2.08
        6.20   417.90    .102E+07    8417.1          7.74       2.02
        6.56   418.26    .114E+07    9654.5          7.95       1.97

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)  36.70     3.49    6.00  39.94      0.08      1.18
   OUTFLOW: ID= 1 (******)  36.70     2.59    6.25  39.94      0.06      1.18


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   1.532 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  33.073
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    31.02   1.532     6.42    33.07
      + ID2= 2 (******):    36.70   2.591     6.25    39.94
        ================================================
        ID = 3 (******):    67.72   3.993     6.33    36.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================

        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
        V    V   I    SS     U   U   A A   L
         V  V    I     SS    U   U  AAAAA  L
         V  V    I      SS   U   U  A   A  L
          VV     I    SSSSS  UUUUU  A   A  LLLLL

         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
        O   O    T      T    H   H   Y Y   MM MM  O   O
        O   O    T      T    H   H    Y    M   M  O   O
         OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9

 DATE: 02/19/2026                          TIME: 02:35:55

 USER:


 COMMENTS: _____________________________________________________

--------------------------------------------------------------------------------
   ***********************************************
   ** SIMULATION : 50 Year 12 hr 5 min SCS Type  **
   ***********************************************

--------------------
|    READ STORM    |    Filename: C:\Users\DPham\AppD
|                  |              ata\Local\Temp\
|                  |              257afcce-e1cf-4cdb-b646-cb15a9fd682a\0131b2a2
| Ptotal= 93.81 mm |    Comments: 50 Year 12 hr 5 min SCS Type II CC
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    2.34 |  3.08    3.75 |  6.17   16.86 |  9.25    3.28
                0.08    2.34 |  3.17    3.75 |  6.25   16.86 |  9.33    3.28
                0.17    2.34 |  3.25    3.75 |  6.33   16.86 |  9.42    3.28
```

```
                0.25    2.34 |  3.33    3.75 |  6.42   16.86 |  9.50    3.28
                0.33    2.34 |  3.42    3.75 |  6.50    7.49 |  9.58    3.28
                0.42    2.34 |  3.50    3.75 |  6.58    7.49 |  9.67    3.28
                0.50    2.34 |  3.58    3.75 |  6.67    7.49 |  9.75    3.28
                0.58    2.34 |  3.67    3.75 |  6.75    7.49 |  9.83    3.28
                0.67    2.34 |  3.75    3.75 |  6.83    7.49 |  9.92    3.28
                0.75    2.34 |  3.83    3.75 |  6.92    7.49 | 10.00    1.87
                0.83    2.34 |  3.92    3.75 |  7.00    5.62 | 10.08    1.87
                0.92    2.34 |  4.00    5.62 |  7.08    5.62 | 10.17    1.87
                1.00    2.34 |  4.08    5.62 |  7.17    5.62 | 10.25    1.87
                1.08    2.34 |  4.17    5.62 |  7.25    5.62 | 10.33    1.87
                1.17    2.34 |  4.25    5.62 |  7.33    5.62 | 10.42    1.87
                1.25    2.34 |  4.33    5.62 |  7.42    5.62 | 10.50    1.87
                1.33    2.34 |  4.42    5.62 |  7.50    5.62 | 10.58    1.87
                1.42    2.34 |  4.50    7.49 |  7.58    5.62 | 10.67    1.87
                1.50    2.34 |  4.58    7.49 |  7.67    5.62 | 10.75    1.87
                1.58    2.34 |  4.67    7.49 |  7.75    5.62 | 10.83    1.87
                1.67    2.34 |  4.75    7.49 |  7.83    5.62 | 10.92    1.87
                1.75    2.34 |  4.83    7.49 |  7.92    5.62 | 11.00    1.87
                1.83    2.34 |  4.92    7.49 |  8.00    3.28 | 11.08    1.87
                1.92    2.34 |  5.00   11.24 |  8.08    3.28 | 11.17    1.87
                2.00    2.81 |  5.08   11.24 |  8.17    3.28 | 11.25    1.87
                2.08    2.81 |  5.17   11.24 |  8.25    3.28 | 11.33    1.87
                2.17    2.81 |  5.25   11.24 |  8.33    3.28 | 11.42    1.87
                2.25    2.81 |  5.33   11.24 |  8.42    3.28 | 11.50    1.87
                2.33    2.81 |  5.42   11.24 |  8.50    3.28 | 11.58    1.87
                2.42    2.81 |  5.50   44.95 |  8.58    3.28 | 11.67    1.87
                2.50    2.81 |  5.58   44.95 |  8.67    3.28 | 11.75    1.87
                2.58    2.81 |  5.67   44.95 |  8.75    3.28 | 11.83    1.87
                2.67    2.81 |  5.75  123.62 |  8.83    3.28 | 11.92    1.87
                2.75    2.81 |  5.83  123.62 |  8.92    3.28 | 12.00    1.87
                2.83    2.81 |  5.92  123.62 |  9.00    3.28 |
                2.92    2.81 |  6.00   16.86 |  9.08    3.28 |
                3.00    3.75 |  6.08   16.86 |  9.17    3.28 |

 ---------------------
 | CALIB             |
 | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number   (CN)= 79.5
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.47

      Unit Hyd Qpeak  (cms)=   3.502

      PEAK FLOW       (cms)=   3.498 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  48.327
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.515

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------
 | CALIB             |
 | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number   (CN)= 79.4
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.46

      Unit Hyd Qpeak  (cms)=   4.557

      PEAK FLOW       (cms)=   4.516 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  48.216
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.514

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------
 | ADD HYD  ( 50010)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40010):    43.09   3.498     6.33    48.33
       + ID2= 2 ( 40030):    54.88   4.516     6.33    48.22
         ================================================
         ID = 3 ( 50010):    97.97   8.014     6.33    48.26

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 ---------------------
 | ROUTE CHN( 60010)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00        160.98        0.0450
                  10.00        160.83        0.0450
                  20.00        160.72        0.0450
                  30.00        160.67        0.0450
                  40.00        160.61        0.0450
                  50.00        160.60        0.0450
                  60.00        160.55        0.0450
                  70.00        160.65        0.0450
                  80.00        159.78        0.0450
                  90.00        157.33    0.0450 /0.0350  Main Channel
                 100.00        157.18        0.0350      Main Channel
                 110.00        158.55        0.0450
                 120.00        160.34        0.0450
                 130.00        160.29        0.0450
                 140.00        160.30        0.0450
                 150.00        160.38        0.0450
                 160.00        160.53        0.0450
                 170.00        160.58        0.0450
                 180.00        160.51        0.0450
                 190.00        160.53        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.15  157.33    .123E+04        0.4         0.43      57.39
         0.32  157.50    .422E+04        2.5         0.88      27.82
         0.49  157.67    .768E+04        6.3         1.20      20.47
         0.66  157.83    .116E+05       11.5         1.45      16.89
         0.83  158.00    .160E+05       18.2         1.67      14.70
         0.99  158.17    .209E+05       26.5         1.86      13.18
         1.16  158.34    .263E+05       36.3         2.03      12.06
         1.33  158.51    .321E+05       47.9         2.19      11.18
         1.50  158.68    .384E+05       62.7         2.40      10.21
         1.67  158.84    .451E+05       79.9         2.60       9.41
         1.84  159.01    .522E+05       99.0         2.79       8.79
         2.00  159.18    .597E+05      120.2         2.96       8.28
         2.17  159.35    .676E+05      143.3         3.11       7.86
         2.34  159.52    .759E+05      168.5         3.26       7.51
         2.51  159.69    .846E+05      195.8         3.40       7.20
         2.68  159.86    .938E+05      224.4         3.52       6.97
         2.85  160.02    .104E+06      254.6         3.61       6.78
         3.02  160.19    .114E+06      287.5         3.70       6.62
         3.18  160.36    .127E+06      315.8         3.64       6.72

                                      <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50010)   97.97     8.01    6.33  48.26      0.54      1.27
    OUTFLOW: ID= 1 ( 60010)   97.97     6.82    6.58  48.26      0.51      1.22


 ---------------------
 | CALIB             |
 | STANDHYD ( 40020)|   Area     (ha)=  51.32
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
 ---------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      33.87        17.45
      Dep. Storage     (mm)=       2.00         6.20
      Average Slope     (%)=       1.30         1.30
      Length            (m)=     584.91        50.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     123.62       119.45
                 over (min)        5.00        20.00
      Storage Coeff.  (min)=       6.82 (ii)   16.17 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       9.14         3.14        11.422 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17         6.00
      RUNOFF VOLUME    (mm)=      91.81        56.75        76.38
      TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
      RUNOFF COEFFICIENT   =       0.98         0.60         0.81

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------
 | ADD HYD  ( 50020)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40020):    51.32  11.422     6.00    76.38
       + ID2= 2 ( 60010):    97.97   6.818     6.58    48.26
         ================================================
         ID = 3 ( 50020):   149.29  12.723     6.00    57.93

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 ---------------------
 | ROUTE CHN( 60020)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00        153.66        0.0450
                   1.00        153.24        0.0450
                   2.00        152.95        0.0450
                   3.00        152.70        0.0450
                   4.00        152.40        0.0450
                   5.00        152.09        0.0450
                   6.00        151.83        0.0450
                   7.00        151.60        0.0450
                   8.00        151.49    0.0450 /0.0350  Main Channel
                   9.00        151.42        0.0350      Main Channel
                  10.00        151.38        0.0350      Main Channel
                  11.00        151.40        0.0350      Main Channel
                  12.00        151.38        0.0350      Main Channel
                  13.00        151.38        0.0350      Main Channel
                  14.00        151.38        0.0350      Main Channel
                  15.00        151.50    0.0350 /0.0450  Main Channel
                  16.00        151.56        0.0450
                  17.00        151.60        0.0450
                  25.00        153.59        0.0450
                  26.00        153.63        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.12  151.49    .140E+03        0.2         0.36      10.54
         0.23  151.60    .355E+03        0.9         0.58       6.57
         0.34  151.72    .624E+03        2.0         0.74       5.11
         0.45  151.83    .916E+03        3.6         0.89       4.27
         0.57  151.94    .123E+04        5.5         1.02       3.73
         0.68  152.05    .157E+04        7.8         1.13       3.35
         0.79  152.17    .193E+04       10.5         1.24       3.06
         0.90  152.28    .231E+04       13.6         1.34       2.83
         1.02  152.39    .271E+04       17.1         1.43       2.65
         1.13  152.50    .314E+04       20.9         1.52       2.50
         1.24  152.62    .358E+04       25.2         1.60       2.37
         1.35  152.73    .405E+04       29.8         1.67       2.26
         1.47  152.84    .454E+04       34.9         1.75       2.17
         1.58  152.95    .505E+04       40.3         1.81       2.09
         1.69  153.07    .558E+04       46.2         1.88       2.01
         1.80  153.18    .614E+04       52.6         1.95       1.95
         1.92  153.29    .672E+04       59.4         2.01       1.88
         2.03  153.40    .731E+04       66.7         2.07       1.83
         2.14  153.52    .793E+04       74.5         2.14       1.77

                                      <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50020)  149.29    12.72    6.00  57.93      0.87      1.31
    OUTFLOW: ID= 1 ( 60020)  149.29    11.91    6.00  57.93      0.84      1.28


 ---------------------
 | CALIB             |
 | STANDHYD ( 40040)|   Area     (ha)=  70.68
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
 ---------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      52.31        18.38
      Dep. Storage     (mm)=       2.00         6.00
      Average Slope     (%)=       1.20         1.20
      Length            (m)=     686.45        52.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=     123.62       150.38
                 over (min)       10.00        20.00
      Storage Coeff.  (min)=       7.69 (ii)   16.45 (ii)
      Unit Hyd. Tpeak (min)=      10.00        20.00
      Unit Hyd. peak  (cms)=       0.13         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=      12.40         4.19        15.475 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17         6.00
      RUNOFF VOLUME    (mm)=      91.81        60.89        79.44
      TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
      RUNOFF COEFFICIENT   =       0.98         0.65         0.85

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------
 | ADD HYD  ( 50220)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ---------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40040):    70.68  15.475     6.00    79.44
       + ID2= 2 ( 60020):   149.29  11.913     6.00    57.93
         ================================================
         ID = 3 ( 50220):   219.97  27.388     6.00    64.84

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 ---------------------
 | RESERVOIR( 70010)|     OVERFLOW IS ON
 | IN= 2---> OUT= 1 |
 | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
 ---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                            0.0000      0.0000  |    3.4010      4.4390
                            0.0530      0.4910  |    4.8380      5.0560
                            0.0890      0.7040  |    5.8470      5.5380
                            0.2040      1.0890  |    6.5980      5.9190
                            0.3240      1.4800  |    7.2560      6.2250
                            0.3890      1.7490  |    7.9030      6.4820
                            0.4470      1.9970  |    8.4910      6.6820
                            0.5090      2.3490  |   12.0680      7.1150
                            0.7420      2.9150  |   20.0000      7.2000
                            1.7580      3.6690  |    0.0000      0.0000

                                 AREA     QPEAK     TPEAK       R.V.
```

```
                                (ha)      (cms)      (hrs)       (mm)
   INFLOW : ID= 2 ( 50220)    219.973     27.388      6.00       64.84
   OUTFLOW: ID= 1 ( 70010)    219.973      8.790      7.00       64.82
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00        0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 32.09
                  TIME SHIFT OF PEAK FLOW         (min)= 60.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  6.7215

--------------------------------------------------------------------------------

  ---------------------------
  | Junction Command(70011) |
  ---------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   219.97   8.790     7.00    64.82
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 70012):   219.97   8.790     7.00    64.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         148.49        0.0450
                  3.00         148.12        0.0450
                  6.00         148.07        0.0450
                  9.00         147.63        0.0450
                 12.00         147.56        0.0450
                 15.00         147.55        0.0450
                 18.00         147.46        0.0450
                 21.00         147.41        0.0450
                 24.00         147.36        0.0450
                 27.00         147.38        0.0450
                 30.00         147.22        0.0450
                 33.00         147.00        0.0450
                 36.00         146.34        0.0450
                 39.00         145.57        0.0350      Main Channel
                 42.00         145.39        0.0350      Main Channel
                 45.00         145.66        0.0350      Main Channel
                 48.00         146.68        0.0450
                 51.00         147.50        0.0450
                 55.00         148.22        0.0450
                 60.00         148.42        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.09    145.48    .145E+03       0.0         0.25       83.65
       0.18    145.57    .581E+03       0.2         0.40       52.70
       0.35    145.74    .189E+04       1.1         0.73       29.09
       0.52    145.91    .348E+04       2.7         0.99       21.52
       0.68    146.07    .532E+04       5.0         1.19       17.84
       0.85    146.24    .740E+04       7.9         1.36       15.60
       1.02    146.41    .973E+04      11.5         1.51       14.07
       1.19    146.58    .123E+05      15.9         1.64       12.94
       1.35    146.74    .152E+05      21.2         1.78       11.93
       1.52    146.91    .183E+05      27.8         1.94       10.99
       1.69    147.08    .218E+05      35.0         2.05       10.39
       1.86    147.25    .259E+05      43.0         2.12       10.03
       2.02    147.41    .309E+05      50.6         2.09       10.18
       2.19    147.58    .383E+05      61.5         2.05       10.37
       2.36    147.75    .474E+05      77.1         2.07       10.25
       2.52    147.91    .571E+05      95.6         2.14        9.95
       2.69    148.08    .672E+05     116.0         2.20        9.65
       2.86    148.25    .783E+05     138.1         2.25        9.45
       3.03    148.42    .904E+05     163.4         2.31        9.22

                                     <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 70012)  219.97     8.79    7.00  64.82      0.89      1.40
   OUTFLOW: ID= 1 ( 60040)  219.97     8.40    7.17  64.82      0.87      1.38


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94         19.34
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       3.30          3.30
     Length            (m)=     590.36         68.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62        134.62
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.19 (ii)    12.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       8.48          4.58       12.547 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=      91.81         60.50        75.84
     TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
     RUNOFF COEFFICIENT   =       0.98          0.64         0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40050):    52.28  12.547     6.00    75.84
     + ID2= 2 ( 60040):   219.97   8.402     7.17    64.82
       ================================================
       ID = 3 ( 50040):   272.25  13.008     6.00    66.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         146.35        0.0450
                 16.00         145.17        0.0450
                 18.00         144.62        0.0450
                 20.00         143.50        0.0450
                 26.00         141.63        0.0350      Main Channel
                 30.00         142.17        0.0350      Main Channel
                 34.00         144.28        0.0450
                 38.00         145.27        0.0450
                 50.00         146.42        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.25    141.88    .129E+03       0.2         0.54       12.17
       0.50    142.13    .516E+03       1.1         0.86        7.67
       0.74    142.38    .111E+04       3.4         1.21        5.42
       0.99    142.63    .184E+04       7.0         1.50        4.37
       1.24    142.87    .269E+04      11.9         1.75        3.76
       1.49    143.12    .366E+04      18.2         1.96        3.36
       1.74    143.37    .476E+04      25.9         2.15        3.06
       1.98    143.62    .597E+04      35.3         2.33        2.82
       2.23    143.87    .729E+04      46.5         2.52        2.61
       2.48    144.11    .869E+04      59.3         2.69        2.44
       2.73    144.36    .102E+05      74.3         2.88        2.28
       2.97    144.61    .118E+05      92.4         3.09        2.13
       3.22    144.86    .136E+05     111.6         3.24        2.03
       3.47    145.11    .156E+05     133.1         3.37        1.95
       3.72    145.35    .178E+05     152.6         3.38        1.94
       3.97    145.60    .206E+05     175.6         3.37        1.95
       4.21    145.85    .239E+05     204.3         3.37        1.95
       4.46    146.10    .279E+05     238.6         3.38        1.95
       4.71    146.35    .324E+05     279.0         3.40        1.93

                                     <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  272.25    13.01    6.00  66.94      1.28      1.78
   OUTFLOW: ID= 1 ( 60050)  272.25    11.94    6.00  66.94      1.24      1.75


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--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         142.52        0.0450
                  2.00         142.41        0.0450
                  4.00         142.26        0.0450
                  6.00         142.08        0.0450
                  8.00         141.85        0.0450
                 10.00         141.61        0.0450
                 12.00         141.38        0.0450
                 14.00         141.11        0.0450
                 16.00         140.93        0.0450
                 18.00         140.83        0.0450
                 20.00         140.73        0.0350      Main Channel
                 22.00         140.55        0.0350      Main Channel
                 24.00         140.49        0.0350      Main Channel
                 26.00         140.65        0.0350      Main Channel
                 28.00         141.04        0.0450
                 30.00         141.72        0.0450
                 32.00         142.19        0.0450
                 40.00         142.50        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.08    140.57    .466E+02       0.0         0.23       24.59
       0.15    140.65    .155E+03       0.2         0.38       14.98
       0.23    140.73    .305E+03       0.5         0.51       11.12
       0.34    140.84    .598E+03       1.2         0.68        8.29
       0.45    140.95    .995E+03       2.3         0.80        7.09
       0.56    141.06    .147E+04       3.9         0.91        6.22
       0.68    141.17    .201E+04       6.1         1.04        5.45
       0.79    141.28    .259E+04       8.8         1.16        4.89
       0.90    141.39    .321E+04      12.0         1.27        4.47
       1.01    141.50    .389E+04      15.6         1.36        4.16
       1.12    141.61    .461E+04      19.7         1.45        3.90
       1.23    141.72    .537E+04      24.3         1.54        3.69
       1.34    141.84    .619E+04      29.4         1.61        3.52
       1.45    141.95    .707E+04      35.0         1.68        3.37
       1.56    142.06    .799E+04      41.1         1.75        3.24
       1.67    142.17    .898E+04      47.8         1.81        3.13
       1.79    142.28    .101E+05      54.6         1.85        3.07
       1.90    142.39    .113E+05      62.1         1.87        3.03
       2.01    142.50    .127E+05      70.3         1.88        3.01

                                     <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  272.25    11.94    6.00  66.94      0.90      1.27
   OUTFLOW: ID= 1 ( 60060)  272.25    11.39    6.08  66.94      0.88      1.25


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94          1.90
     Dep. Storage     (mm)=       2.00          7.70
     Average Slope     (%)=       2.60          2.60
     Length            (m)=     137.56         98.00
     Mannings n           =      0.015         0.320

     Max.Eff.Inten.(mm/hr)=     123.62         98.53
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       2.32 (ii)    15.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.30          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.30         0.474 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17         6.00
     RUNOFF VOLUME    (mm)=      91.81         56.57        65.83
     TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
     RUNOFF COEFFICIENT   =       0.98          0.60         0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40060):     2.84   0.474     6.00    65.83
     + ID2= 2 ( 60060):   272.25  11.392     6.08    66.94
       ================================================
       ID = 3 ( 50070):   275.09  11.732     6.08    66.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30         13.55
     Dep. Storage     (mm)=       2.00          5.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     515.42         72.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62        125.99
                   over (min)        5.00         20.00
```

```
      Storage Coeff.  (min)=       6.18 (ii)   16.85 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.19         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       6.96         2.66          8.900 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
      RUNOFF VOLUME    (mm)=      91.81        60.13         77.24
      TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
      RUNOFF COEFFICIENT   =       0.98         0.64          0.82

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40080):    39.85   8.900     6.00    77.24
      + ID2= 2 ( 50070):   275.09  11.732     6.08    66.93
        ================================================
        ID = 3 ( 50080):   314.94  19.510     6.00    68.23

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         141.24        0.0450
                  40.00         140.58        0.0450
                  50.00         140.57        0.0450
                  60.00         140.36        0.0450
                  70.00         140.19        0.0450
                  80.00         140.15        0.0450
                  90.00         139.70        0.0450
                 100.00         139.54        0.0350      Main Channel
                 110.00         139.97        0.0450
                 120.00         140.53        0.0450
                 130.00         140.63        0.0450
                 140.00         140.72        0.0450
                 150.00         140.87        0.0450
                 190.00         141.16        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.09  139.63    .150E+03       0.1          0.18      43.53
         0.17  139.71    .598E+03       0.4          0.30      27.01
         0.26  139.80    .126E+04       1.1          0.42      19.24
         0.34  139.88    .209E+04       2.2          0.52      15.58
         0.43  139.97    .307E+04       3.8          0.60      13.36
         0.51  140.05    .420E+04       6.1          0.70      11.45
         0.60  140.14    .548E+04       9.0          0.79      10.19
         0.68  140.22    .714E+04      11.3          0.76      10.55
         0.77  140.31    .919E+04      15.7          0.82       9.77
         0.85  140.39    .115E+05      21.0          0.88       9.11
         0.94  140.48    .141E+05      27.4          0.94       8.54
         1.02  140.56    .169E+05      34.6          0.99       8.12
         1.11  140.65    .205E+05      41.1          0.97       8.32
         1.19  140.74    .248E+05      51.5          1.00       8.02
         1.28  140.82    .296E+05      64.0          1.04       7.70
         1.36  140.91    .348E+05      78.0          1.08       7.44
         1.45  140.99    .407E+05      93.6          1.11       7.24
         1.53  141.08    .472E+05     111.7          1.14       7.05
         1.62  141.16    .545E+05     132.2          1.17       6.87

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94    19.51     6.00  68.23      0.83      0.86
   OUTFLOW: ID= 1 ( 60080)  314.94    15.76     6.17  68.23      0.77      0.82


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.99         3.46
     Dep. Storage     (mm)=       2.00         9.68
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     172.19        99.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=     123.62        67.93
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       2.72 (ii)   19.72 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.29         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.41          0.491 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81        47.30         53.42
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.50          0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  77.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40090):     4.45   0.491     6.00    53.42
      + ID2= 2 ( 60080):   314.94  15.755     6.17    68.23
        ================================================
        ID = 3 ( 50090):   319.39  16.196     6.17    68.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         138.71        0.0450
                   4.00         136.97        0.0450
                  28.00         135.94        0.0450
                  32.00         135.79        0.0350      Main Channel
                  36.00         135.23        0.0350      Main Channel
                  40.00         135.71    0.0350 /0.0450  Main Channel
                  54.00         136.96        0.0450
                  80.00         138.63        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.16  135.39    .631E+02       0.1          0.44      12.42
         0.31  135.55    .253E+03       0.5          0.69       7.83
         0.47  135.71    .568E+03       1.6          0.91       5.97
         0.65  135.89    .114E+04       4.2          1.20       4.52
         0.84  136.07    .209E+04       8.7          1.35       4.02
         1.02  136.25    .342E+04      15.4          1.47       3.70
         1.20  136.44    .511E+04      24.8          1.58       3.44
         1.38  136.62    .718E+04      37.2          1.69       3.21
         1.57  136.80    .962E+04      53.1          1.79       3.02
         1.75  136.98    .124E+05      72.7          1.90       2.85
         1.93  137.17    .155E+05      97.8          2.05       2.64
         2.11  137.35    .188E+05     127.1          2.20       2.47
         2.30  137.53    .223E+05     160.4          2.34       2.31
         2.48  137.71    .259E+05     197.8          2.48       2.19
         2.66  137.90    .298E+05     239.5          2.61       2.07
         2.85  138.08    .339E+05     285.4          2.74       1.98
         3.03  138.26    .381E+05     335.6          2.86       1.89
         3.21  138.44    .426E+05     390.3          2.98       1.82
         3.39  138.63    .472E+05     449.4          3.10       1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  319.39    16.20     6.17  68.02      1.03      1.48
   OUTFLOW: ID= 1 ( 60100)  319.39    15.86     6.17  68.02      1.03      1.47


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.46        14.44
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     423.45       125.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     123.62        78.65
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       5.50 (ii)   23.83 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.20         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.75         1.75          4.820 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25          6.00
     RUNOFF VOLUME    (mm)=      91.81        56.79         71.65
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.61          0.76

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  83.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40100):    26.90   4.820     6.00    71.65
      + ID2= 2 ( 60100):   319.39  15.857     6.17    68.02
        ================================================
        ID = 3 ( 50110):   346.28  18.548     6.17    68.31

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

     Unit Hyd Qpeak  (cms)=   3.961

     PEAK FLOW       (cms)=   4.038 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  50.528
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.539

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

     Unit Hyd Qpeak  (cms)=   4.875

     PEAK FLOW       (cms)=   5.506 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  53.375
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.569

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40120):    44.60   4.038     6.33    50.53
      + ID2= 2 ( 40130):    63.82   5.506     6.42    53.37
        ================================================
        ID = 3 ( 50130):   108.42   9.534     6.33    52.20

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         155.27        0.0450
                   2.00         155.23        0.0450
                   4.00         155.21        0.0450
                   6.00         155.08        0.0450
                   8.00         154.94        0.0450
                  10.00         154.68        0.0450
                  12.00         154.21        0.0450
                  14.00         153.90        0.0450
                  16.00         153.41        0.0350      Main Channel
                  18.00         153.58        0.0350      Main Channel
                  20.00         153.72    0.0350 /0.0450  Main Channel
                  22.00         153.77        0.0450
                  24.00         153.77        0.0450
                  26.00         153.82        0.0450
                  28.00         153.79        0.0450
                  30.00         153.87        0.0450
                  32.00         153.99        0.0450
                  34.00         154.44        0.0450
                  36.00         154.86        0.0450
                  40.00         155.37        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.10  153.50    .107E+03       0.0          0.27      87.23
         0.20  153.60    .429E+03       0.1          0.42      55.65
         0.29  153.70    .991E+03       0.4          0.55      42.98
         0.39  153.80    .201E+04       0.9          0.66      35.52
         0.49  153.90    .408E+04       2.1          0.71      33.15
         0.59  153.99    .651E+04       3.7          0.81      29.01
         0.69  154.09    .916E+04       6.1          0.93      25.22
         0.79  154.19    .120E+05       8.9          1.05      22.39
         0.88  154.29    .149E+05      12.3          1.16      20.20
```

```
       0.98   154.39    .179E+05      16.2          1.27      18.49
       1.08   154.49    .211E+05      20.5          1.37      17.13
       1.18   154.58    .244E+05      25.4          1.47      16.02
       1.28   154.68    .278E+05      30.7          1.56      15.10
       1.37   154.78    .314E+05      36.4          1.63      14.38
       1.47   154.88    .351E+05      42.5          1.71      13.77
       1.57   154.98    .391E+05      48.9          1.76      13.33
       1.67   155.07    .433E+05      55.6          1.81      12.98
       1.77   155.17    .478E+05      63.0          1.86      12.65
       1.86   155.27    .528E+05      69.8          1.86      12.62

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42     9.53    6.33  52.20      0.80      1.07
   OUTFLOW: ID= 1 ( 60130)  108.42     7.61    6.67  52.20      0.74      0.99



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      46.69         19.07
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     662.12         66.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     123.62        118.93
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       7.35 (ii)    18.41 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.17          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=      12.57          3.38         15.008 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81         56.88         78.19
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.61          0.83

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40140):    65.76  15.008     6.00    78.19
     + ID2= 2 ( 60130):   108.42   7.613     6.67    52.20
       ====================================================
       ID = 3 ( 50180):   174.18  16.789     6.00    62.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.55          3.33
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       1.00          1.00
     Length            (m)=     304.26         66.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     123.62         93.83
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       4.99 (ii)    18.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.22          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.37          0.46          3.696 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81         53.21         81.38
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.57          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.74          8.05
     Dep. Storage     (mm)=       2.00          8.12
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     303.13        131.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     123.62         64.86
                   over (min)        5.00         25.00
     Storage Coeff.  (min)=       3.83 (ii)    23.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.25          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.81          0.80          2.276 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25          6.00
     RUNOFF VOLUME    (mm)=      91.81         47.85         64.84
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.51          0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.90        0.0450
                   1.00        154.69        0.0450
                   2.00        154.30        0.0450
                   3.00        154.00    0.0450 /0.0350  Main Channel
                   4.00        153.74        0.0350      Main Channel
                   5.00        153.51        0.0350      Main Channel
                   6.00        153.46        0.0350      Main Channel
                   7.00        153.77        0.0350      Main Channel
                   8.00        154.10    0.0350 /0.0450  Main Channel
                   9.00        154.50        0.0450
                  10.00        154.84        0.0450
                  11.00        155.13        0.0450
                  12.00        155.26        0.0450
                  13.00        155.32        0.0450
                  14.00        155.42        0.0450
                  15.00        155.52        0.0450
                  16.00        155.62        0.0450
                  17.00        155.69        0.0450
                  18.00        155.76        0.0450
                  20.00        155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   153.57    .445E+02        0.0          0.32      21.18
        0.22   153.68    .135E+03        0.2          0.51      13.45
        0.33   153.79    .262E+03        0.4          0.66      10.46
        0.43   153.89    .423E+03        0.8          0.79       8.73
        0.54   154.00    .616E+03        1.3          0.90       7.61
        0.68   154.14    .900E+03        2.4          1.09       6.30
        0.81   154.27    .123E+04        3.8          1.27       5.40
        0.95   154.41    .160E+04        5.5          1.42       4.83
        1.08   154.54    .201E+04        7.6          1.55       4.43
        1.22   154.68    .246E+04        9.9          1.67       4.12
        1.35   154.81    .294E+04       12.7          1.78       3.86
        1.48   154.94    .345E+04       15.8          1.88       3.65
        1.62   155.08    .400E+04       19.2          1.97       3.48
        1.75   155.21    .458E+04       22.9          2.05       3.34
        1.89   155.35    .524E+04       26.8          2.11       3.26
        2.02   155.48    .599E+04       31.4          2.16       3.18
        2.16   155.62    .682E+04       36.5          2.20       3.12
        2.29   155.75    .774E+04       41.9          2.23       3.08
        2.43   155.89    .878E+04       48.0          2.25       3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     2.28    6.00  64.84      0.66      1.07
   OUTFLOW: ID= 1 ( 60190)   13.78     1.96    6.00  64.83      0.62      1.00



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--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      17.41          5.53
     Dep. Storage     (mm)=       2.00          6.75
     Average Slope     (%)=       3.00          3.00
     Length            (m)=     391.08        150.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     123.62         68.45
                   over (min)        5.00         25.00
     Storage Coeff.  (min)=       4.17 (ii)    21.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.24          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.79          0.61          6.149 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25          6.00
     RUNOFF VOLUME    (mm)=      91.81         50.77         81.44
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.54          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40180):    13.89   3.696     6.00    81.38
     + ID2= 2 ( 40200):    22.94   6.149     6.00    81.44
       ====================================================
       ID = 3 ( 50200):    36.83   9.846     6.00    81.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50200):    36.83   9.846     6.00    81.42
     + ID2= 2 ( 60190):    13.78   1.963     6.00    64.83
       ====================================================
       ID = 1 ( 50200):    50.61  11.808     6.00    76.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.01          1.06
     Dep. Storage     (mm)=       2.00          6.27
     Average Slope     (%)=       0.90          0.90
     Length            (m)=     201.21        118.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     123.62         58.32
                   over (min)        5.00         30.00
     Storage Coeff.  (min)=       4.02 (ii)    27.29 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.24          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.68          0.10          1.730 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33          6.00
     RUNOFF VOLUME    (mm)=      91.81         50.52         84.28
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.54          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40210):     6.07   1.730     6.00    84.28
     + ID2= 2 ( 50200):    50.61  11.808     6.00    76.90
       ====================================================
       ID = 3 ( 50210):    56.68  13.539     6.00    77.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        152.62        0.0450
                   7.00        152.39        0.0450
                   8.00        152.02        0.0450
                   9.00        151.48        0.0450
                  10.00        151.01        0.0450
                  11.00        150.56    0.0450 /0.0350  Main Channel
                  12.00        150.38        0.0350      Main Channel
                  13.00        150.40        0.0350      Main Channel
                  14.00        150.36        0.0350      Main Channel
```

```
                  15.00        150.60    0.0350 /0.0450  Main Channel
                  16.00        150.99        0.0450
                  17.00        151.50        0.0450
                  18.00        151.91        0.0450
                  19.00        152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  150.46    .580E+02       0.1          0.30      17.06
        0.20  150.56    .160E+03       0.3          0.48      10.57
        0.32  150.68    .314E+03       0.7          0.70       7.18
        0.44  150.80    .489E+03       1.4          0.89       5.71
        0.56  150.92    .686E+03       2.3          1.03       4.89
        0.69  151.04    .904E+03       3.5          1.16       4.35
        0.81  151.16    .114E+04       4.8          1.28       3.95
        0.93  151.29    .140E+04       6.4          1.38       3.66
        1.05  151.41    .167E+04       8.1          1.48       3.42
        1.17  151.53    .196E+04      10.1          1.57       3.22
        1.29  151.65    .227E+04      12.3          1.65       3.06
        1.41  151.77    .260E+04      14.8          1.73       2.93
        1.54  151.89    .295E+04      17.5          1.80       2.81
        1.66  152.01    .331E+04      20.4          1.87       2.70
        1.78  152.13    .369E+04      23.6          1.94       2.61
        1.90  152.26    .409E+04      27.0          2.00       2.52
        2.02  152.38    .451E+04      30.7          2.06       2.45
        2.14  152.50    .500E+04      33.4          2.03       2.49
        2.26  152.62    .563E+04      37.3          2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50210)   56.68    13.54    6.00  77.69      1.35      1.69
   OUTFLOW: ID= 1 ( 60210)   56.68    13.00    6.00  77.69      1.33      1.67


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.91         2.40
     Dep. Storage     (mm)=       2.00         6.17
     Average Slope     (%)=       0.60         0.60
     Length            (m)=     274.66        79.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     123.62        69.10
                   over (min)      5.00        25.00
     Storage Coeff.  (min)=       5.47 (ii)   24.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.20         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.89         0.25        3.044 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25         6.00
     RUNOFF VOLUME    (mm)=      91.81        51.38        82.81
     TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
     RUNOFF COEFFICIENT   =       0.98         0.55         0.88

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40220):    11.32   3.044     6.00    82.81
     + ID2= 2 ( 60210):    56.68  13.002     6.00    77.69
       ====================================================
       ID = 3 ( 50120):    68.00  16.045     6.00    78.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50120):    68.00  16.045     6.00    78.54
     + ID2= 2 ( 50180):   174.18  16.789     6.00    62.01
       ====================================================
       ID = 3 ( 50140):   242.18  32.834     6.00    66.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        152.29        0.0450
                    2.00        152.20        0.0450
                    4.00        152.17        0.0450
                    6.00        152.15        0.0450
                    8.00        151.78        0.0450
                   10.00        151.28        0.0450
                   12.00        150.79        0.0450
                   14.00        150.20    0.0450 /0.0350  Main Channel
                   16.00        149.82        0.0350      Main Channel
                   18.00        149.51        0.0350      Main Channel
                   20.00        149.24        0.0350      Main Channel
                   22.00        149.48        0.0350      Main Channel
                   24.00        150.00    0.0350 /0.0450  Main Channel
                   26.00        150.52        0.0450
                   28.00        151.14        0.0450
                   30.00        151.68        0.0450
                   32.00        152.11        0.0450
                   34.00        152.20        0.0450
                   35.00        152.27        0.0450
                   38.00        152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15  149.39    .694E+02       0.1          0.32      19.63
        0.31  149.54    .273E+03       0.4          0.53      11.92
        0.46  149.70    .577E+03       1.1          0.72       8.87
        0.61  149.85    .972E+03       2.2          0.87       7.30
        0.76  150.00    .145E+04       3.9          1.01       6.26
        0.93  150.16    .205E+04       6.4          1.18       5.36
        1.09  150.33    .274E+04       9.9          1.37       4.62
        1.25  150.49    .350E+04      14.2          1.54       4.11
        1.42  150.65    .434E+04      19.3          1.69       3.75
        1.58  150.82    .524E+04      25.2          1.83       3.47
        1.74  150.98    .621E+04      31.8          1.95       3.26
        1.91  151.14    .726E+04      39.2          2.06       3.09
        2.07  151.31    .839E+04      47.5          2.16       2.94
        2.23  151.47    .959E+04      56.6          2.25       2.82
        2.40  151.63    .109E+05      66.7          2.34       2.72
        2.56  151.80    .122E+05      77.6          2.41       2.63
        2.72  151.96    .137E+05      89.3          2.48       2.55
        2.89  152.12    .153E+05     102.0          2.55       2.49
        3.05  152.29    .172E+05     111.6          2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)   242.18    32.83    6.00  66.65      1.77      1.96
   OUTFLOW: ID= 1 ( 60140)   242.18    30.80    6.00  66.65      1.72      1.93


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--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        151.02        0.0450
                    2.00        150.89        0.0450
                    4.00        150.73        0.0450
                    6.00        150.65        0.0450
                    8.00        150.38        0.0450
                   10.00        149.93        0.0450
                   12.00        149.51        0.0450
                   14.00        149.02    0.0450 /0.0350  Main Channel
                   16.00        148.64        0.0350      Main Channel
                   18.00        148.27        0.0350      Main Channel
                   20.00        148.39        0.0350      Main Channel
                   22.00        148.60        0.0350      Main Channel
                   24.00        148.94    0.0350 /0.0450  Main Channel
                   26.00        149.34        0.0450
                   28.00        149.66        0.0450
                   30.00        150.12        0.0450
                   32.00        150.45        0.0450
                   34.00        150.52        0.0450
                   36.00        150.60        0.0450
                   38.00        150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11  148.38    .283E+02       0.0          0.26      13.34
        0.22  148.49    .107E+03       0.2          0.44       7.98
        0.34  148.60    .226E+03       0.6          0.58       6.07
        0.45  148.72    .380E+03       1.3          0.72       4.90
        0.56  148.83    .563E+03       2.2          0.84       4.20
        0.67  148.94    .775E+03       3.5          0.95       3.72
        0.80  149.07    .105E+04       5.5          1.11       3.17
        0.93  149.20    .136E+04       8.2          1.27       2.77
        1.06  149.32    .170E+04      11.3          1.41       2.50
        1.18  149.45    .207E+04      14.9          1.52       2.31
        1.31  149.58    .248E+04      19.1          1.63       2.17
        1.44  149.71    .292E+04      23.8          1.72       2.05
        1.57  149.83    .340E+04      29.1          1.81       1.95
        1.70  149.96    .391E+04      34.9          1.89       1.87
        1.82  150.09    .445E+04      41.4          1.97       1.79
        1.95  150.22    .502E+04      48.4          2.04       1.73
        2.08  150.35    .563E+04      56.0          2.10       1.67
        2.21  150.47    .628E+04      63.9          2.15       1.64
        2.33  150.60    .702E+04      71.1          2.14       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60140)   242.18    30.80    6.00  66.65      1.61      1.83
   OUTFLOW: ID= 1 ( 60150)   242.18    29.68    6.08  66.65      1.58      1.81


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--------------------
| CALIB            |
| STANDHYD ( 40150)|   Area    (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.11         2.26
     Dep. Storage     (mm)=       2.00         6.34
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     189.18        45.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     123.62       100.57
                   over (min)      5.00        15.00
     Storage Coeff.  (min)=       2.92 (ii)   10.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.09
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.96         0.42        1.332 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      91.81        53.97        73.69
     TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
     RUNOFF COEFFICIENT   =       0.98         0.58         0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40150):     5.37    1.332     6.00    73.69
     + ID2= 2 ( 60150):   242.18   29.684     6.08    66.65
       ====================================================
       ID = 3 ( 50160):   247.54   30.611     6.00    66.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40240)|   Area    (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.79         1.50
     Dep. Storage     (mm)=       2.00         5.70
     Average Slope     (%)=       3.40         3.40
     Length            (m)=     261.85        70.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     123.62        88.21
                   over (min)      5.00        10.00
     Storage Coeff.  (min)=       3.16 (ii)    7.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.27         0.14
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.98         0.30        3.278 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=      91.81        51.66        85.74
     TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
     RUNOFF COEFFICIENT   =       0.98         0.55         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40250)|   Area    (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.61         4.75
     Dep. Storage     (mm)=       2.00         7.14
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     298.43        70.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=     123.62        81.02
                   over (min)      5.00        20.00
     Storage Coeff.  (min)=       4.00 (ii)   16.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
```

```
      Unit Hyd. peak  (cms)=       0.24         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.84         0.60          3.264 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
      RUNOFF VOLUME    (mm)=      91.81        49.47         76.10
      TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
      RUNOFF COEFFICIENT   =       0.98         0.53          0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        155.56        0.0450
                    2.00        155.23        0.0450
                    4.00        154.58        0.0450
                    6.00        153.92        0.0450
                    8.00        153.53        0.0450
                   10.00        152.64        0.0450
                   12.00        152.43    0.0450 /0.0350  Main Channel
                   14.00        152.24        0.0350      Main Channel
                   16.00        152.07        0.0350      Main Channel
                   18.00        152.30    0.0350 /0.0450  Main Channel
                   20.00        152.46        0.0450
                   22.00        155.55        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   152.18    .895E+02        0.1         0.43      24.33
        0.24   152.30    .356E+03        0.4         0.69      15.20
        0.43   152.49    .118E+04        2.1         1.10       9.55
        0.62   152.68    .234E+04        5.5         1.48       7.09
        0.81   152.88    .361E+04       10.4         1.83       5.76
        1.00   153.07    .494E+04       16.7         2.13       4.94
        1.19   153.26    .634E+04       24.2         2.40       4.38
        1.38   153.45    .781E+04       32.8         2.65       3.97
        1.58   153.64    .936E+04       42.5         2.86       3.67
        1.77   153.83    .110E+05       53.3         3.05       3.45
        1.96   154.02    .128E+05       65.6         3.23       3.26
        2.15   154.21    .147E+05       79.4         3.40       3.09
        2.34   154.40    .167E+05       94.5         3.57       2.95
        2.53   154.60    .188E+05      111.0         3.73       2.82
        2.72   154.79    .209E+05      128.7         3.89       2.71
        2.91   154.98    .231E+05      147.8         4.03       2.61
        3.10   155.17    .255E+05      168.3         4.17       2.52
        3.30   155.36    .279E+05      189.2         4.28       2.46
        3.49   155.55    .305E+05      211.3         4.38       2.40

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     3.26    6.00  76.10      0.49      1.21
   OUTFLOW: ID= 1 ( 60240)   13.36     2.68    6.00  76.09      0.46      1.15


--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40240):    10.28   3.278     6.00    85.74
      + ID2= 2 ( 50160):   247.54  30.611     6.00    66.81
        ================================================
        ID = 3 ( 50250):   257.83  33.889     6.00    67.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50250):   257.83  33.889     6.00    67.56
      + ID2= 2 ( 60240):    13.36   2.683     6.00    76.09
        ================================================
        ID = 1 ( 50250):   271.19  36.573     6.00    67.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        149.47        0.0450
                    3.00        149.39        0.0450
                    6.00        149.18        0.0450
                    9.00        148.85        0.0450
                   12.00        148.60        0.0450
                   15.00        148.16        0.0450
                   18.00        147.81        0.0450
                   21.00        147.50        0.0450
                   24.00        147.26        0.0350      Main Channel
                   27.00        146.88        0.0350      Main Channel
                   30.00        146.72        0.0350      Main Channel
                   33.00        147.27    0.0350 /0.0450  Main Channel
                   36.00        147.60        0.0450
                   39.00        147.71        0.0450
                   42.00        148.10        0.0450
                   45.00        148.90        0.0450
                   48.00        149.05        0.0450
                   51.00        149.12        0.0450
                   54.00        149.43        0.0450
                   57.00        149.67        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14   146.85    .156E+03        0.1         0.30      40.24
        0.27   146.99    .583E+03        0.4         0.51      23.51
        0.41   147.13    .119E+04        1.1         0.68      17.78
        0.54   147.26    .198E+04        2.2         0.82      14.76
        0.69   147.41    .309E+04        4.3         1.02      11.88
        0.84   147.56    .455E+04        7.2         1.15      10.50
        0.98   147.70    .637E+04       10.9         1.24       9.73
        1.13   147.85    .862E+04       15.8         1.32       9.12
        1.28   148.00    .111E+05       21.7         1.41       8.55
        1.42   148.14    .139E+05       28.7         1.50       8.06
        1.57   148.29    .169E+05       37.1         1.59       7.58
        1.72   148.44    .200E+05       46.5         1.68       7.16
        1.87   148.58    .233E+05       57.0         1.77       6.80
        2.01   148.73    .268E+05       68.3         1.85       6.53
        2.16   148.88    .305E+05       80.9         1.92       6.28
        2.31   149.02    .345E+05       93.2         1.95       6.17
        2.45   149.17    .391E+05      106.6         1.97       6.11
        2.60   149.32    .441E+05      123.2         2.02       5.97
        2.75   149.47    .495E+05      139.7         2.04       5.91

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    36.57    6.00  67.98      1.56      1.59
   OUTFLOW: ID= 1 ( 60250)  271.19    30.89    6.08  67.98      1.46      1.52


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
--------------------
                                    IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      15.93         12.52
      Dep. Storage     (mm)=       2.00          6.70
      Average Slope     (%)=       1.30          1.30
      Length            (m)=     435.49         46.00
      Mannings n           =       0.015         0.300

      Max.Eff.Inten.(mm/hr)=     123.62        117.38
                over (min)          5.00         15.00
      Storage Coeff.  (min)=       5.71 (ii)    14.85 (ii)
      Unit Hyd. Tpeak (min)=       5.00         15.00
      Unit Hyd. peak  (cms)=       0.20          0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.00          2.40          6.100 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.08          6.00
      RUNOFF VOLUME    (mm)=      91.81         55.47         71.09
      TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
      RUNOFF COEFFICIENT   =       0.98          0.59          0.76

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40260):    28.45   6.100     6.00    71.09
      + ID2= 2 ( 60250):   271.19  30.894     6.08    67.98
        ================================================
        ID = 3 ( 50260):   299.64  35.301     6.08    68.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        143.17        0.0450
                    4.00        143.15        0.0450
                    8.00        143.14        0.0450
                   12.00        142.95        0.0450
                   16.00        142.87        0.0450
                   20.00        142.67        0.0450
                   24.00        142.24        0.0450
                   28.00        141.84        0.0450
                   32.00        141.61        0.0450
                   36.00        141.32        0.0450
                   40.00        140.98        0.0450
                   44.00        140.88        0.0450
                   48.00        139.95        0.0350      Main Channel
                   52.00        140.09        0.0350      Main Channel
                   56.00        141.11        0.0450
                   60.00        141.43        0.0450
                   76.00        143.21        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.17   140.12    .479E+03        0.2         0.48      36.89
        0.34   140.29    .147E+04        1.2         0.86      20.63
        0.51   140.46    .272E+04        2.9         1.12      15.78
        0.68   140.63    .421E+04        5.3         1.33      13.28
        0.85   140.80    .596E+04        8.5         1.51      11.69
        1.02   140.97    .812E+04       12.0         1.56      11.29
        1.19   141.14    .111E+05       17.6         1.68      10.52
        1.36   141.31    .147E+05       25.4         1.83       9.67
        1.53   141.48    .191E+05       34.9         1.93       9.14
        1.70   141.65    .242E+05       46.4         2.03       8.71
        1.87   141.81    .301E+05       59.9         2.11       8.38
        2.04   141.98    .367E+05       76.6         2.21       7.99
        2.21   142.15    .439E+05       95.9         2.31       7.63
        2.37   142.32    .517E+05      117.9         2.42       7.30
        2.54   142.49    .600E+05      142.7         2.52       7.01
        2.71   142.66    .689E+05      170.3         2.62       6.74
        2.88   142.83    .785E+05      198.2         2.68       6.60
        3.05   143.00    .892E+05      225.9         2.68       6.58
        3.22   143.17    .101E+06      250.7         2.63       6.73

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50260)  299.64    35.30    6.08  68.28      1.53      1.94
   OUTFLOW: ID= 1 ( 60260)  299.64    30.34    6.25  68.27      1.44      1.88


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
--------------------
                                    IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.12          6.71
      Dep. Storage     (mm)=       2.00          8.03
      Average Slope     (%)=       1.10          1.10
      Length            (m)=     256.01         73.00
      Mannings n           =       0.015         0.330

      Max.Eff.Inten.(mm/hr)=     123.62         96.96
                over (min)          5.00         20.00
      Storage Coeff.  (min)=       4.37 (ii)    18.86 (ii)
      Unit Hyd. Tpeak (min)=       5.00         20.00
      Unit Hyd. peak  (cms)=       0.23          0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.73          0.95          1.403 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.17          6.00
      RUNOFF VOLUME    (mm)=      91.81         53.77         62.14
      TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
      RUNOFF COEFFICIENT   =       0.98          0.57          0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40270):     9.83   1.403     6.00    62.14
      + ID2= 2 ( 60260):   299.64  30.340     6.25    68.27
        ================================================
        ID = 3 ( 50270):   309.47  31.382     6.25    68.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                                    IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.16         11.14
      Dep. Storage     (mm)=       2.00          7.27
      Average Slope     (%)=       1.10          1.10
      Length            (m)=     456.83         53.00
```

```
      Mannings n           =      0.015        0.310
      Max.Eff.Inten.(mm/hr)=     123.62       114.29
                   over (min)        5.00        20.00
      Storage Coeff.  (min)=       6.18 (ii)   16.97 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.19         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.23         1.96          6.636 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      91.81        53.95          73.51
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.98         0.58           0.78

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  76.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40280):    31.30    6.636     6.00    73.51
      + ID2= 2 ( 50270):   309.47   31.382     6.25    68.08
        ==================================================
        ID = 3 ( 50280):   340.77   34.869     6.17    68.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        139.35        0.0450
                   3.00        139.19        0.0450
                   6.00        138.46        0.0450
                  27.00        137.71        0.0450
                  30.00        137.44        0.0350      Main Channel
                  33.00        137.26        0.0350      Main Channel
                  36.00        137.51        0.0350      Main Channel
                  39.00        137.64    0.0350 /0.0450  Main Channel
                  42.00        137.71        0.0450
                  57.00        139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   137.35   .361E+02       0.0          0.30       17.09
        0.18   137.44   .145E+03       0.2          0.48       10.76
        0.30   137.55   .369E+03       0.8          0.68        7.57
        0.41   137.67   .717E+03       1.9          0.82        6.28
        0.52   137.78   .124E+04       3.9          0.97        5.27
        0.63   137.89   .192E+04       6.8          1.10        4.67
        0.74   138.00   .273E+04      10.7          1.20        4.25
        0.86   138.11   .369E+04      15.7          1.30        3.93
        0.97   138.23   .480E+04      21.8          1.39        3.67
        1.08   138.34   .605E+04      29.1          1.48        3.46
        1.19   138.45   .745E+04      37.8          1.56        3.28
        1.31   138.56   .895E+04      48.6          1.67        3.07
        1.42   138.68   .105E+05      60.8          1.78        2.88
        1.53   138.79   .121E+05      74.4          1.89        2.71
        1.64   138.90   .138E+05      89.3          1.99        2.57
        1.76   139.01   .155E+05     105.5          2.10        2.44
        1.87   139.13   .172E+05     123.0          2.19        2.33
        1.98   139.24   .190E+05     140.8          2.27        2.25
        2.09   139.35   .209E+05     159.0          2.33        2.20

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    34.87    6.17  68.58      1.16      1.53
   OUTFLOW: ID= 1 ( 60280)  340.77    34.58    6.25  68.58      1.15      1.53
```

```
| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       6.71         4.81
      Dep. Storage     (mm)=       2.00         7.99
      Average Slope     (%)=       1.60         1.60
      Length            (m)=     277.19        63.00
      Mannings n           =      0.015        0.340
      Max.Eff.Inten.(mm/hr)=     123.62       107.83
                   over (min)        5.00        20.00
      Storage Coeff.  (min)=       4.09 (ii)   15.66 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.24         0.07
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.75         0.82          2.341 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      91.81        52.23          70.02
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.98         0.56           0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  76.3    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40300):    11.53    2.341     6.00    70.02
      + ID2= 2 ( 60280):   340.77   34.578     6.25    68.58
        ==================================================
        ID = 3 ( 50300):   352.30   35.639     6.25    68.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        137.26        0.0450
                   4.00        136.94        0.0450
                   8.00        136.82        0.0450
                  12.00        136.69        0.0450
                  16.00        136.55        0.0450
                  36.00        135.52        0.0350      Main Channel
                  64.00        136.21        0.0450
                  75.00        136.49        0.0450
                  84.00        137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   135.61   .491E+02       0.1          0.26       12.99
        0.18   135.70   .196E+03       0.4          0.42        8.18
        0.27   135.79   .442E+03       1.2          0.55        6.24
        0.36   135.88   .785E+03       2.5          0.66        5.15
        0.45   135.97   .123E+04       4.6          0.77        4.44
        0.53   136.06   .177E+04       7.5          0.87        3.93
        0.62   136.15   .240E+04      11.3          0.96        3.55
        0.71   136.24   .314E+04      16.4          1.07        3.19
        0.80   136.32   .397E+04      23.3          1.20        2.84
        0.89   136.41   .490E+04      31.4          1.32        2.60
        0.98   136.50   .592E+04      40.8          1.42        2.41
        1.07   136.59   .701E+04      51.5          1.51        2.27
        1.16   136.68   .816E+04      63.4          1.59        2.14
        1.25   136.77   .938E+04      76.6          1.67        2.04
        1.34   136.86   .107E+05      91.2          1.75        1.95
        1.42   136.95   .120E+05     107.3          1.83        1.87
        1.51   137.04   .135E+05     125.8          1.91        1.78
        1.60   137.13   .149E+05     145.6          2.00        1.71
        1.69   137.22   .164E+05     166.8          2.08        1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30    35.64    6.25  68.63      0.93      1.36
   OUTFLOW: ID= 1 ( 60300)  352.30    35.39    6.25  68.63      0.93      1.36
```

```
| CALIB            |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.77         6.39
      Dep. Storage     (mm)=       2.00         8.38
      Average Slope     (%)=       3.20         3.20
      Length            (m)=     247.21        43.00
      Mannings n           =      0.015        0.350
      Max.Eff.Inten.(mm/hr)=     123.62        93.85
                   over (min)        5.00        15.00
      Storage Coeff.  (min)=       3.11 (ii)   11.14 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.27         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.74         1.09          1.698 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      91.81        51.25          60.79
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.98         0.55           0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17    1.698     6.00    60.79
      + ID2= 2 ( 60300):   352.30   35.390     6.25    68.63
        ==================================================
        ID = 3 ( 50340):   361.46   36.231     6.25    68.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   346.28   18.548     6.17    68.31
      + ID2= 2 ( 50340):   361.46   36.231     6.25    68.43
        ==================================================
        ID = 3 ( 50350):   707.75   54.411     6.25    68.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        134.05        0.0450
                  24.00        133.67        0.0450
                  30.00        131.85        0.0450
                  36.00        131.42        0.0450
                  42.00        130.48        0.0450
                  48.00        130.42        0.0350      Main Channel
                  54.00        130.42        0.0350      Main Channel
                  60.00        130.62        0.0450
                  66.00        130.77        0.0450
                  72.00        131.03        0.0450
                  78.00        131.43        0.0450
                  84.00        131.38        0.0450
                  90.00        131.33        0.0450
                  96.00        131.98        0.0450
                 102.00        133.31        0.0450
                 120.00        133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   130.42   .133E+02       0.0          0.03      768.63
        0.19   130.61   .383E+04       1.6          0.61       40.07
        0.37   130.79   .994E+04       6.6          0.97       25.18
        0.56   130.98   .179E+05      15.1          1.23       19.81
        0.75   131.16   .272E+05      27.2          1.46       16.72
        0.93   131.35   .377E+05      42.2          1.64       14.88
        1.12   131.54   .521E+05      60.9          1.71       14.26
        1.30   131.72   .683E+05      87.2          1.86       13.07
        1.49   131.91   .857E+05     119.1          2.03       11.99
        1.68   132.09   .104E+06     157.8          2.22       10.96
        1.86   132.28   .122E+06     201.6          2.41       10.11
        2.05   132.47   .141E+06     250.1          2.59        9.41
        2.23   132.65   .160E+06     303.1          2.76        8.82
        2.42   132.84   .180E+06     360.6          2.93        8.32
        2.61   133.02   .200E+06     422.5          3.08        7.90
        2.79   133.21   .221E+06     488.7          3.24        7.53
        2.98   133.40   .242E+06     552.2          3.34        7.29
        3.16   133.58   .264E+06     613.6          3.40        7.17
        3.35   133.77   .288E+06     658.8          3.34        7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    54.41    6.25  68.37      1.05      1.68
   OUTFLOW: ID= 1 ( 60350)  707.75    47.11    6.42  68.36      0.98      1.66
```

```
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.03   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.164

      PEAK FLOW       (cms)=   0.165 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.425
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.633

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.324 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.446
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.340

     PEAK FLOW       (cms)=   0.367 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.458
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     2.67   0.367     6.17    59.46
     + ID2= 2 (******):     2.22   0.324     6.08    59.45
       ================================================
       ID = 3 (******):     4.89   0.689     6.17    59.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       1.00     1.00     0.00     0.00     0.00     2.00
       2.00     2.00     0.00     0.00     0.00     4.00
      10.00    10.00     0.00     0.00     0.00    20.00

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   4.89      0.69      6.17   59.45
     ================================================
     ID= 2  (   2)    :   2.44      0.34      6.17   59.45
     ID= 3  (   2)    :   2.44      0.34      6.17   59.45
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     1.03   0.165     6.08    59.42
     + ID2= 2 (******):     2.44   0.345     6.17    59.45
       ================================================
       ID = 3 (******):     3.48   0.504     6.08    59.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.15   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.480

     PEAK FLOW       (cms)=   0.535 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.465
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.034
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.629

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     4.15   0.535     6.17    59.46
     + ID2= 2 (******):     0.26   0.056     6.00    59.03
       ================================================
       ID = 3 (******):     4.41   0.568     6.17    59.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     4.41   0.568     6.17    59.44
     + ID2= 2 (******):     3.48   0.504     6.08    59.44
       ================================================
       ID = 1 (******):     7.89   1.068     6.17    59.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.78   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.199

     PEAK FLOW       (cms)=   0.162 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.137
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.630

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.14   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.292

     PEAK FLOW       (cms)=   0.305 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.450
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.122

     PEAK FLOW       (cms)=   0.116 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.386
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.47   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.170

     PEAK FLOW       (cms)=   0.190 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.464
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.67   0.116     6.08    59.39
     + ID2= 2 (******):     2.14   0.305     6.17    59.45
       ================================================
       ID = 3 (******):     2.81   0.419     6.08    59.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     2.81   0.419     6.08    59.44
     + ID2= 2 (******):     0.78   0.162     6.00    59.14
       ================================================
       ID = 1 (******):     3.59   0.564     6.08    59.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     3.59   0.564     6.08    59.37
     + ID2= 2 (******):     1.47   0.190     6.17    59.46
       ================================================
       ID = 3 (******):     5.06   0.741     6.08    59.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     7.89   1.068     6.17    59.44
     + ID2= 2 (******):     5.06   0.741     6.08    59.40
       ================================================
       ID = 3 ( 50360):    12.95   1.794     6.08    59.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50360):    12.95   1.794     6.08    59.42
     + ID2= 2 ( 60350):   707.75  47.111     6.42    68.36
       ================================================
       ID = 1 ( 50360):   720.69  48.314     6.42    68.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.30        0.0450
                   6.00         127.39        0.0450
                  12.00         127.46        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04        0.0450
                  72.00         123.15        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   122.98    .246E+03       0.4          0.31      10.02
        0.33   123.21    .251E+04      11.8          0.86       3.57
        0.56   123.45    .538E+04      39.9          1.37       2.25
        0.80   123.68    .842E+04      81.1          1.78       1.73
        1.04   123.92    .116E+05     134.5          2.13       1.44
        1.27   124.16    .150E+05     200.0          2.46       1.25
        1.51   124.39    .185E+05     278.3          2.78       1.11
        1.74   124.63    .220E+05     367.4          3.08       1.00
        1.98   124.86    .257E+05     466.7          3.35       0.92
        2.22   125.10    .294E+05     576.1          3.61       0.85
```

```
        2.45   125.34    .332E+05     695.4          3.86       0.80
        2.69   125.57    .371E+05     824.8          4.10       0.75
        2.92   125.81    .410E+05     963.8          4.33       0.71
        3.16   126.04    .451E+05    1112.3          4.55       0.68
        3.39   126.28    .492E+05    1270.1          4.76       0.65
        3.63   126.51    .534E+05    1437.3          4.97       0.62
        3.87   126.75    .576E+05    1613.7          5.16       0.60
        4.10   126.99    .620E+05    1791.1          5.33       0.58
        4.34   127.22    .665E+05    1970.4          5.47       0.56

                                              <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50360)  720.69    48.31    6.42  68.20      0.61      1.44
    OUTFLOW: ID= 1 ( 60390)  720.69    48.20    6.42  68.20      0.61      1.43



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   3.496 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  55.843
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.595

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   3.496     6.08     55.84
      + ID2= 2 ( 60390):   720.69  48.203     6.42     68.20
        ================================================
        ID = 3 ( 50390):   741.24  49.608     6.42     67.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       11.83         6.10
     Dep. Storage     (mm)=        2.00         6.08
     Average Slope     (%)=        1.50         1.50
     Length            (m)=      345.74        42.00
     Mannings n           =       0.015        0.280

     Max.Eff.Inten.(mm/hr)=      123.62       136.76
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=        4.77 (ii)   12.25 (ii)
     Unit Hyd. Tpeak (min)=        5.00        15.00
     Unit Hyd. peak  (cms)=        0.22         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.13         1.50          4.471 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=       91.81        60.57         76.92
     TOTAL RAINFALL   (mm)=       93.81        93.81         93.81
     RUNOFF COEFFICIENT   =        0.98         0.65          0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        127.70        0.0450
                  18.00        126.87        0.0450
                  24.00        125.30        0.0450
                  30.00        123.90        0.0450
                  36.00        123.14        0.0450
                  42.00        123.07        0.0450
                  48.00        122.88        0.0450
                  54.00        122.90        0.0450
                  60.00        122.95        0.0450
                  66.00        123.04    0.0450 /0.0350  Main Channel
                  72.00        122.86        0.0350      Main Channel
                  78.00        122.98        0.0450
                  84.00        122.97        0.0450
                  90.00        122.96        0.0450
                  96.00        122.92        0.0450
                 102.00        123.50        0.0450
                 108.00        124.18        0.0450
                 120.00        127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   122.98    .275E+03       0.7         0.35       6.78
        0.36   123.21    .218E+04      14.7         0.95       2.47
        0.59   123.45    .437E+04      44.6         1.44       1.63
        0.83   123.68    .670E+04      87.2         1.84       1.28
        1.06   123.92    .916E+04     141.6         2.19       1.08
        1.30   124.16    .117E+05     208.1         2.51       0.94
        1.54   124.39    .144E+05     287.0         2.82       0.84
        1.77   124.63    .171E+05     376.7         3.11       0.76
        2.01   124.86    .199E+05     476.5         3.38       0.70
        2.24   125.10    .228E+05     586.1         3.64       0.65
        2.48   125.33    .257E+05     705.6         3.88       0.61
        2.71   125.57    .287E+05     835.1         4.12       0.57
        2.95   125.80    .317E+05     974.0         4.35       0.54
        3.19   126.04    .348E+05    1122.3         4.56       0.52
        3.42   126.28    .379E+05    1279.8         4.77       0.49
        3.66   126.51    .411E+05    1446.6         4.97       0.47
        3.89   126.75    .444E+05    1622.6         5.17       0.46
        4.13   126.98    .477E+05    1786.6         5.29       0.45
        4.36   127.22    .513E+05    1942.9         5.36       0.44

                                              <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 40370)   17.93     4.47    6.00  76.92      0.19      0.42
    OUTFLOW: ID= 1 ( 60370)   17.93     3.73    6.00  76.92      0.17      0.40



--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   741.24  49.608     6.42     67.86
      + ID2= 2 ( 60370):    17.93   3.732     6.00     76.92
        ================================================
        ID = 3 ( 50400):   759.17  51.037     6.42     68.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        125.01        0.0450
                  20.00        123.70        0.0450
                  25.00        123.04        0.0450
                  30.00        120.84        0.0450
                  35.00        119.81    0.0450 /0.0350  Main Channel
                  40.00        119.74        0.0350      Main Channel
                  65.00        120.12        0.0450
                  90.00        120.58        0.0450
                 100.00        125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.07   119.81    .209E+03       0.1         0.27      34.81
        0.35   120.09    .326E+04       4.7         0.83      11.50
        0.62   120.36    .916E+04      21.3         1.34       7.16
        0.90   120.63    .176E+05      51.5         1.68       5.69
        1.17   120.91    .270E+05      96.6         2.05       4.67
        1.44   121.18    .367E+05     153.8         2.41       3.98
        1.72   121.46    .466E+05     222.1         2.74       3.50
        1.99   121.73    .567E+05     300.7         3.05       3.14
        2.26   122.00    .669E+05     389.1         3.34       2.87
        2.54   122.28    .774E+05     487.1         3.62       2.65
        2.81   122.55    .880E+05     594.2         3.88       2.47
        3.09   122.82    .988E+05     710.4         4.13       2.32
        3.36   123.10    .110E+06     834.4         4.36       2.20
        3.63   123.37    .121E+06     964.4         4.57       2.10
        3.91   123.65    .133E+06    1104.4         4.76       2.01
        4.18   123.92    .145E+06    1250.0         4.93       1.94
        4.45   124.19    .159E+06    1406.7         5.09       1.88
        4.73   124.47    .172E+06    1575.5         5.25       1.82
        5.00   124.74    .187E+06    1756.1         5.39       1.77

                                              <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50400)  759.17    51.04    6.42  68.07      0.89      1.67
    OUTFLOW: ID= 1 ( 60400)  759.17    50.65    6.50  68.07      0.89      1.67



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area     (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        2.26         5.65
     Dep. Storage     (mm)=        2.00         9.48
     Average Slope     (%)=        1.10         1.10
     Length            (m)=      229.75       574.00
     Mannings n           =       0.015        0.350

     Max.Eff.Inten.(mm/hr)=      123.62        30.89
                   over (min)        5.00        90.00
     Storage Coeff.  (min)=        4.09 (ii)   85.83 (ii)
     Unit Hyd. Tpeak (min)=        5.00        90.00
     Unit Hyd. peak  (cms)=        0.24         0.01
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.67         0.22          0.707 (iii)
     TIME TO PEAK    (hrs)=        6.00         7.42          6.00
     RUNOFF VOLUME    (mm)=       91.81        47.35         58.49
     TOTAL RAINFALL   (mm)=       93.81        93.81         93.81
     RUNOFF COEFFICIENT   =        0.98         0.50          0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40410):     7.92   0.707     6.00     58.49
      + ID2= 2 ( 60400):   759.17  50.653     6.50     68.07
        ================================================
        ID = 3 ( 50410):   767.09  50.854     6.50     67.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.315 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.415
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.095 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.367
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.170 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.402
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   6.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.37

     Unit Hyd Qpeak  (cms)=   0.697

     PEAK FLOW       (cms)=   0.801 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  59.471
     TOTAL RAINFALL   (mm)=  93.808
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      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.75   0.801     6.25    59.47
      + ID2= 2 (******):     1.01   0.170     6.08    59.40
        ================================================
        ID = 3 (******):     7.76   0.945     6.17    59.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

      Unit Hyd Qpeak  (cms)=   0.317

      PEAK FLOW       (cms)=   0.325 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.440
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

      Unit Hyd Qpeak  (cms)=   0.169

      PEAK FLOW       (cms)=   0.177 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  59.450
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.24   0.177     6.17    59.45
      + ID2= 2 (******):     2.16   0.325     6.08    59.44
        ================================================
        ID = 3 (******):     3.40   0.501     6.08    59.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     3.40   0.501     6.08    59.44
      + ID2= 2 (******):     7.76   0.945     6.17    59.46
        ================================================
        ID = 1 (******):    11.16   1.440     6.17    59.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.68   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

      Unit Hyd Qpeak  (cms)=   0.341

      PEAK FLOW       (cms)=   0.368 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  59.458
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

      Unit Hyd Qpeak  (cms)=   0.136

      PEAK FLOW       (cms)=   0.125 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.367
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.633

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.129

      PEAK FLOW       (cms)=   0.112 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  59.310
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.632

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.112     6.00    59.31
      + ID2= 2 (******):     2.44   0.345     6.17    59.45
        ================================================
        ID = 3 (******):     3.06   0.451     6.08    59.42

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.95   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.158

      PEAK FLOW       (cms)=   0.156 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.415
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.633

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

      Unit Hyd Qpeak  (cms)=   0.196

      PEAK FLOW       (cms)=   0.199 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.433
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.28   0.199     6.08    59.43
      + ID2= 2 (******):     0.95   0.156     6.08    59.41
        ================================================
        ID = 3 (******):     2.23   0.355     6.08    59.43

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.23   0.355     6.08    59.43
      + ID2= 2 (******):     0.71   0.125     6.08    59.37
        ================================================
        ID = 1 (******):     2.94   0.480     6.08    59.41

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.94   0.480     6.08    59.41
      + ID2= 2 (******):     1.92   0.315     6.08    59.41
        ================================================
        ID = 3 (******):     4.86   0.795     6.08    59.41

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.86   0.795     6.08    59.41
      + ID2= 2 (******):     0.54   0.095     6.08    59.37
        ================================================
        ID = 1 (******):     5.40   0.891     6.08    59.41

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.40   0.891     6.08    59.41
      + ID2= 2 (******):     2.68   0.368     6.17    59.46
        ================================================
        ID = 3 (******):     8.08   1.247     6.08    59.42

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     8.08   1.247     6.08    59.42
      + ID2= 2 (******):     3.06   0.451     6.08    59.42
        ================================================
        ID = 1 (******):    11.13   1.698     6.08    59.42

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   1.698     6.08    59.42
      + ID2= 2 (******):    11.16   1.440     6.17    59.46
        ================================================
        ID = 3 (******):    22.30   3.083     6.08    59.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.197

      PEAK FLOW       (cms)=   0.198 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.425
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.633

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.174

      PEAK FLOW       (cms)=   0.172 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.415
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.633

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  18.31   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.457

      PEAK FLOW       (cms)=   1.810 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  59.477
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
45289> ------------------------------------------------------------------------------
45290>
45291> --------------------
45292> | ADD HYD  (******)|
45293> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
45294> --------------------         (ha)    (cms)    (hrs)     (mm)
45295>         ID1= 1 (******):     1.05   0.172     6.08    59.41
45296>       + ID2= 2 (******):    18.31   1.810     6.33    59.48
45297>         ================================================
45298>         ID = 3 (******):    19.36   1.917     6.33    59.47
45299>
45300>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45301> ------------------------------------------------------------------------------
45302>
45303> --------------------
45304> | ADD HYD  (******)|
45305> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
45306> --------------------         (ha)    (cms)    (hrs)     (mm)
45307>         ID1= 3 (******):    19.36   1.917     6.33    59.47
45308>       + ID2= 2 (******):     1.24   0.198     6.08    59.42
45309>         ================================================
45310>         ID = 1 (******):    20.60   2.056     6.25    59.47
45311>
45312>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45313> ------------------------------------------------------------------------------
45314>
45315> --------------------
45316> | ADD HYD  (******)|
45317> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
45318> --------------------         (ha)    (cms)    (hrs)     (mm)
45319>         ID1= 1 (******):    22.30   3.083     6.08    59.44
45320>       + ID2= 2 (******):    20.60   2.056     6.25    59.47
45321>         ================================================
45322>         ID = 3 (******):    42.90   5.029     6.17    59.45
45323>
45324>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45325> ------------------------------------------------------------------------------
45326> --------------------
45327> | CALIB            |
45328> | STANDHYD ( 40420)|   Area    (ha)=  67.57
45329> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
45330> --------------------
45331>                              IMPERVIOUS    PERVIOUS (i)
45332>      Surface Area     (ha)=      20.95        46.62
45333>      Dep. Storage     (mm)=       2.00         7.70
45334>      Average Slope     (%)=       1.90         1.90
45335>      Length            (m)=     671.17        89.00
45336>      Mannings n           =      0.015        0.240
45337>
45338>      Max.Eff.Inten.(mm/hr)=     123.62        91.11
45339>                over (min)        5.00        20.00
45340>      Storage Coeff.  (min)=       6.61 (ii)   18.34 (ii)
45341>      Unit Hyd. Tpeak (min)=       5.00        20.00
45342>      Unit Hyd. peak  (cms)=       0.18         0.06
45343>                                                    *TOTALS*
45344>      PEAK FLOW       (cms)=       5.40         6.30          9.869 (iii)
45345>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
45346>      RUNOFF VOLUME    (mm)=      91.81        53.14          62.81
45347>      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
45348>      RUNOFF COEFFICIENT   =       0.98         0.57           0.67
45349>
45350>
45351>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
45352>             CN*  =  81.0    Ia = Dep. Storage  (Above)
45353>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
45354>            THAN THE STORAGE COEFFICIENT.
45355>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
45356>
45357> ------------------------------------------------------------------------------
45358>
45359> --------------------
45360> | ADD HYD  (******)|
45361> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
45362> --------------------         (ha)    (cms)    (hrs)     (mm)
45363>         ID1= 1 ( 40420):    67.57   9.869     6.00    62.81
45364>       + ID2= 2 (******):    42.90   5.029     6.17    59.45
45365>         ================================================
45366>         ID = 3 (******):   110.47  13.900     6.00    61.50
45367>
45368>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45369> ------------------------------------------------------------------------------
45370>
45371> --------------------
45372> | ADD HYD  ( 50420)|
45373> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
45374> --------------------         (ha)    (cms)    (hrs)     (mm)
45375>         ID1= 1 ( 50410):   767.09  50.854     6.50    67.97
45376>       + ID2= 2 (******):   110.47  13.900     6.00    61.50
45377>         ================================================
45378>         ID = 3 ( 50420):   877.56  59.518     6.42    67.16
45379>
45380>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45381> ------------------------------------------------------------------------------
45382> --------------------
45383> | ROUTE CHN( 60420)|
45384> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
45385> --------------------
45386>                <------ DATA FOR SECTION (   1.1) ------>
45387>                Distance      Elevation       Manning
45388>                    0.00        121.79        0.0450
45389>                   12.00        116.08        0.0450
45390>                   40.00        115.59    0.0450 /0.0350  Main Channel
45391>                   44.00        114.89        0.0350      Main Channel
45392>                   48.00        114.52        0.0350      Main Channel
45393>                   52.00        115.72    0.0350 /0.0450  Main Channel
45394>                   56.00        115.93        0.0450
45395>                   60.00        117.24        0.0450
45396>                   64.00        119.04        0.0450
45397>                   68.00        120.69        0.0450
45398>                   72.00        121.01        0.0450
45399>                   74.00        121.49        0.0450
45400>
45401>       <--------------------- TRAVEL TIME TABLE ---------------------->
45402>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
45403>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
45404>         0.36  114.88    .645E+03        0.7         0.83      14.38
45405>         0.71  115.23    .236E+04        4.6         1.41       8.47
45406>         1.07  115.59    .489E+04       12.6         1.84       6.48
45407>         1.44  115.96    .112E+05       30.9         1.97       6.04
45408>         1.80  116.33    .227E+05       69.1         2.17       5.49
45409>         2.17  116.70    .351E+05      125.6         2.56       4.65
45410>         2.54  117.06    .479E+05      197.5         2.95       4.04
45411>         2.91  117.43    .612E+05      283.9         3.32       3.59
45412>         3.28  117.80    .749E+05      384.1         3.66       3.25
45413>         3.65  118.17    .891E+05      497.4         3.99       2.99
45414>         4.02  118.54    .104E+06      623.5         4.30       2.77
45415>         4.39  118.91    .119E+06      762.2         4.59       2.60
45416>         4.76  119.28    .134E+06      913.1         4.87       2.45
45417>         5.13  119.65    .150E+06     1076.2         5.13       2.32
45418>         5.49  120.02    .166E+06     1251.7         5.38       2.21
45419>         5.86  120.39    .183E+06     1439.5         5.62       2.12
45420>         6.23  120.75    .200E+06     1634.3         5.84       2.04
45421>         6.60  121.12    .219E+06     1831.3         5.99       1.99
45422>         6.97  121.49    .238E+06     2058.5         6.20       1.92
45423>
45424>                                    <---- hydrograph ---->   <-pipe / channel->
45425>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
45426>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
45427>    INFLOW : ID= 2 ( 50420)  877.56    59.52    6.42  67.16      1.71      2.12
45428>    OUTFLOW: ID= 1 ( 60420)  877.56    58.51    6.50  67.16      1.70      2.11
45429>
45430>
45431>
45432> ------------------------------------------------------------------------------
45433> --------------------
45434> | CALIB            |
45435> | STANDHYD ( 40430)|   Area    (ha)=  32.43
45436> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
45437> --------------------
45438>                              IMPERVIOUS    PERVIOUS (i)
45439>      Surface Area     (ha)=      21.41        11.03
45440>      Dep. Storage     (mm)=       2.00         7.80
45441>      Average Slope     (%)=       3.50         3.50
45442>      Length            (m)=     465.00       102.00
45443>      Mannings n           =      0.015        0.320
45444>
45445>      Max.Eff.Inten.(mm/hr)=     123.62        83.64
45446>                over (min)        5.00        20.00
45447>      Storage Coeff.  (min)=       4.42 (ii)   17.45 (ii)
45448>      Unit Hyd. Tpeak (min)=       5.00        20.00
45449>      Unit Hyd. peak  (cms)=       0.23         0.06
45450>                                                    *TOTALS*
45451>      PEAK FLOW       (cms)=       6.97         1.39          7.957 (iii)
45452>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
45453>      RUNOFF VOLUME    (mm)=      91.81        50.13          76.80
45454>      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
45455>      RUNOFF COEFFICIENT   =       0.98         0.53           0.82
45456>
45457> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
45458>
45459>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
45460>             CN*  =  79.3    Ia = Dep. Storage  (Above)
45461>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
45462>            THAN THE STORAGE COEFFICIENT.
45463>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
45464>
45465> ------------------------------------------------------------------------------
45466>
45467> --------------------
45468> | ADD HYD  ( 50430)|
45469> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
45470> --------------------         (ha)    (cms)    (hrs)     (mm)
45471>         ID1= 1 ( 40430):    32.43   7.957     6.00    76.80
45472>       + ID2= 2 ( 60420):   877.56  58.513     6.50    67.16
45473>         ================================================
45474>         ID = 3 ( 50430):   909.99  60.295     6.50    67.50
45475>
45476>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45477> ------------------------------------------------------------------------------
45478> --------------------
45479> | ROUTE CHN( 60430)|
45480> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
45481> --------------------
45482>                <------ DATA FOR SECTION (   1.1) ------>
45483>                Distance      Elevation       Manning
45484>                    0.00        116.29        0.0450
45485>                   20.00        114.05        0.0450
45486>                   25.00        110.83        0.0450
45487>                   30.00        109.36        0.0450
45488>                   35.00        108.23    0.0450 /0.0350  Main Channel
45489>                   40.00        107.52        0.0350      Main Channel
45490>                   45.00        108.00    0.0350 /0.0450  Main Channel
45491>                   50.00        107.84        0.0450
45492>                   55.00        108.21        0.0450
45493>                   60.00        108.95        0.0450
45494>                   65.00        109.35        0.0450
45495>                   70.00        109.41        0.0450
45496>                   75.00        109.48        0.0450
45497>                   80.00        109.77        0.0450
45498>                   85.00        112.20        0.0450
45499>                   90.00        115.48        0.0450
45500>                  100.00        116.29        0.0450
45501>
45502>       <--------------------- TRAVEL TIME TABLE ---------------------->
45503>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
45504>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
45505>         0.24  107.76    .285E+03        0.4         0.74      12.74
45506>         0.48  108.00    .146E+04        2.6         1.01       9.32
45507>         0.97  108.49    .695E+04       23.3         1.90       4.97
45508>         1.46  108.97    .141E+05       64.5         2.60       3.63
45509>         1.94  109.46    .233E+05      116.9         2.84       3.33
45510>         2.43  109.95    .371E+05      214.6         3.28       2.88
45511>         2.92  110.44    .519E+05      350.2         3.83       2.47
45512>         3.41  110.92    .675E+05      515.9         4.34       2.18
45513>         3.89  111.41    .836E+05      711.3         4.82       1.96
45514>         4.38  111.90    .100E+06      933.4         5.28       1.79
45515>         4.87  112.39    .117E+06     1182.4         5.71       1.65
45516>         5.35  112.87    .135E+06     1458.0         6.13       1.54
45517>         5.84  113.36    .153E+06     1758.3         6.52       1.45
45518>         6.33  113.85    .171E+06     2082.9         6.90       1.37
45519>         6.82  114.34    .190E+06     2410.6         7.19       1.31
45520>         7.30  114.82    .210E+06     2758.9         7.43       1.27
45521>         7.79  115.31    .232E+06     3143.1         7.68       1.23
45522>         8.28  115.80    .255E+06     3473.3         7.71       1.23
45523>         8.77  116.29    .282E+06     3812.4         7.67       1.23
45524>
45525>                                    <---- hydrograph ---->   <-pipe / channel->
45526>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
45527>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
45528>    INFLOW : ID= 2 ( 50430)  909.99    60.29    6.50  67.50      1.41      2.51
45529>    OUTFLOW: ID= 1 ( 60430)  909.99    60.08    6.58  67.50      1.40      2.50
45530>
45531>
45532>
45533> ------------------------------------------------------------------------------
45534> --------------------
45535> | CALIB            |
45536> | STANDHYD ( 40440)|   Area    (ha)=  57.11
45537> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
45538> --------------------
45539>                              IMPERVIOUS    PERVIOUS (i)
45540>      Surface Area     (ha)=      37.70        19.42
45541>      Dep. Storage     (mm)=       2.00         6.60
45542>      Average Slope     (%)=       2.50         2.50
45543>      Length            (m)=     617.06        45.00
45544>      Mannings n           =      0.015        0.290
45545>
45546>      Max.Eff.Inten.(mm/hr)=     123.62        75.87
45547>                over (min)        5.00        15.00
45548>      Storage Coeff.  (min)=       5.79 (ii)   14.44 (ii)
45549>      Unit Hyd. Tpeak (min)=       5.00        15.00
45550>      Unit Hyd. peak  (cms)=       0.20         0.08
45551>                                                    *TOTALS*
45552>      PEAK FLOW       (cms)=      12.12         2.37         14.158 (iii)
45553>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
45554>      RUNOFF VOLUME    (mm)=      91.81        44.45          75.23
45555>      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
45556>      RUNOFF COEFFICIENT   =       0.98         0.47           0.80
45557>
45558>
45559>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
45560>             CN*  =  74.5    Ia = Dep. Storage  (Above)
45561>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
45562>            THAN THE STORAGE COEFFICIENT.
45563>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
45564>
45565> ------------------------------------------------------------------------------
45566>
45567> --------------------
45568> | ADD HYD  ( 50440)|
45569> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
45570> --------------------         (ha)    (cms)    (hrs)     (mm)
45571>         ID1= 1 ( 40440):    57.11  14.158     6.00    75.23
45572>       + ID2= 2 ( 60430):   909.99  60.082     6.58    67.50
45573>         ================================================
45574>         ID = 3 ( 50440):   967.10  62.921     6.50    67.96
45575>
45576>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45577> ------------------------------------------------------------------------------
45578> --------------------
45579> | ROUTE CHN( 60440)|
45580> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
45581> --------------------
45582>                <------ DATA FOR SECTION (   1.1) ------>
45583>                Distance      Elevation       Manning
45584>                    0.00        104.01        0.0450
45585>                   10.00        103.90        0.0450
45586>                   20.00        103.74        0.0450
45587>                   30.00        103.66        0.0450
45588>                   40.00        103.60        0.0450
45589>                   50.00        102.52        0.0450
45590>                   60.00        101.16        0.0450
45591>                   70.00        100.60        0.0450
45592>                   80.00        100.17        0.0450
45593>                   90.00         99.85        0.0450
45594>                  100.00         97.89        0.0350      Main Channel
```

```
                110.00         97.62        0.0350      Main Channel
                120.00         99.12        0.0450
                130.00         99.16        0.0450
                140.00         99.36        0.0450
                150.00         99.66        0.0450
                160.00         99.68        0.0450
                180.00         99.76        0.0450
                190.00        104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27   97.89    .102E+04        1.2         0.77      13.74
        0.60   98.21    .381E+04        9.4         1.56       6.74
        0.92   98.53    .738E+04       24.3         2.08       5.05
        1.24   98.86    .117E+05       46.2         2.50       4.22
        1.56   99.18    .171E+05       76.6         2.84       3.71
        1.89   99.50    .264E+05      124.5         2.98       3.53
        2.21   99.82    .403E+05      189.1         2.96       3.56
        2.53  100.15    .597E+05      286.1         3.03       3.48
        2.85  100.47    .809E+05      417.7         3.26       3.23
        3.17  100.79    .104E+06      580.2         3.53       2.98
        3.50  101.11    .128E+06      771.7         3.81       2.77
        3.82  101.44    .153E+06      996.3         4.10       2.57
        4.14  101.76    .179E+06     1248.4         4.40       2.40
        4.46  102.08    .206E+06     1526.4         4.68       2.25
        4.79  102.40    .233E+06     1829.8         4.96       2.13
        5.11  102.73    .261E+06     2156.4         5.22       2.02
        5.43  103.05    .290E+06     2507.0         5.47       1.93
        5.75  103.37    .319E+06     2882.7         5.71       1.85
        6.08  103.69    .350E+06     3194.7         5.77       1.83

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  967.10    62.92    6.50  67.96      1.42      2.67
   OUTFLOW: ID= 1 ( 60440)  967.10    62.51    6.58  67.96      1.41      2.67



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37         17.02
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       0.80          0.80
     Length            (m)=     450.16        150.00
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=     123.62         44.00
               over (min)         5.00         40.00
     Storage Coeff.  (min)=      6.74 (ii)    38.56 (ii)
     Unit Hyd. Tpeak (min)=      5.00         40.00
     Unit Hyd. peak  (cms)=      0.18          0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=      3.97          1.22       4.438 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.50       6.00
     RUNOFF VOLUME    (mm)=     91.81         47.80      65.85
     TOTAL RAINFALL   (mm)=     93.81         93.81      93.81
     RUNOFF COEFFICIENT   =      0.98          0.51       0.70

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40450):    30.40   4.438     6.00    65.85
     + ID2= 2 ( 60440):   967.10  62.509     6.58    67.96
       ================================================
       ID = 3 ( 50450):   997.50  64.150     6.58    67.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         97.16        0.0450
                  3.00         96.00        0.0450
                  6.00         95.32        0.0450
                  9.00         94.64        0.0450
                 12.00         94.43        0.0450
                 15.00         94.29        0.0450
                 18.00         94.10        0.0350      Main Channel
                 21.00         94.02        0.0350      Main Channel
                 24.00         93.70        0.0350      Main Channel
                 27.00         94.22    0.0350 /0.0450  Main Channel
                 30.00         94.90        0.0450
                 32.00         95.30        0.0450
                 34.00         95.78        0.0450
                 36.00         96.25        0.0450
                 38.00         96.60        0.0450
                 48.00         97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.83    .942E+02        0.1         0.39      30.45
        0.27   93.96    .377E+03        0.3         0.62      19.18
        0.40   94.09    .911E+03        0.9         0.69      17.28
        0.59   94.29    .230E+04        3.4         1.06      11.15
        0.78   94.48    .428E+04        7.9         1.32       8.98
        0.97   94.67    .679E+04       14.6         1.53       7.74
        1.16   94.86    .963E+04       23.7         1.75       6.77
        1.35   95.05    .127E+05       34.9         1.96       6.07
        1.54   95.24    .160E+05       48.1         2.14       5.54
        1.73   95.43    .196E+05       63.6         2.31       5.13
        1.92   95.62    .233E+05       81.2         2.48       4.79
        2.11   95.81    .273E+05      101.0         2.63       4.51
        2.30   96.00    .315E+05      123.0         2.78       4.27
        2.49   96.19    .360E+05      147.8         2.93       4.06
        2.68   96.38    .406E+05      174.6         3.07       3.87
        2.87   96.57    .454E+05      203.7         3.20       3.71
        3.06   96.76    .505E+05      232.7         3.28       3.62
        3.25   96.95    .562E+05      264.9         3.36       3.54
        3.44   97.14    .624E+05      300.8         3.43       3.46

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450)  997.50    64.15    6.58  67.89      1.74      2.32
   OUTFLOW: ID= 1 ( 60450)  997.50    63.37    6.67  67.89      1.72      2.31



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--------------------
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36          7.04
     Dep. Storage     (mm)=       2.00          6.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     386.43         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     123.62        127.15
               over (min)         5.00         15.00
     Storage Coeff.  (min)=      4.43 (ii)    10.92 (ii)
     Unit Hyd. Tpeak (min)=      5.00         15.00
     Unit Hyd. peak  (cms)=      0.23          0.09
                                                      *TOTALS*
     PEAK FLOW       (cms)=      3.98          1.65       5.439 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.08       6.00
     RUNOFF VOLUME    (mm)=     91.81         51.99      73.03
     TOTAL RAINFALL   (mm)=     93.81         93.81      93.81
     RUNOFF COEFFICIENT   =      0.98          0.55       0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40   5.439     6.00    73.03
     + ID2= 2 ( 60450):   997.50  63.366     6.67    67.89
       ================================================
       ID = 3 ( 50460):  1019.90  64.039     6.67    68.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         91.61        0.0450
                  3.00         91.57        0.0450
                  6.00         91.15        0.0450
                  9.00         90.70        0.0450
                 12.00         89.72        0.0450
                 15.00         88.86        0.0450
                 18.00         88.38    0.0450 /0.0350  Main Channel
                 21.00         87.96        0.0350      Main Channel
                 24.00         88.18    0.0350 /0.0450  Main Channel
                 26.00         88.19        0.0450
                 28.00         88.30        0.0450
                 30.00         90.32        0.0450
                 32.00         90.49        0.0450
                 34.00         90.80        0.0450
                 36.00         90.85        0.0450
                 38.00         90.97        0.0450
                 40.00         91.15        0.0450
                 42.00         91.29        0.0450
                 44.00         91.40        0.0450
                 46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   88.07    .589E+02        0.0         0.34      23.89
        0.21   88.18    .235E+03        0.3         0.54      15.05
        0.41   88.38    .106E+04        1.8         0.85       9.64
        0.61   88.57    .211E+04        5.3         1.22       6.69
        0.81   88.77    .330E+04       10.2         1.51       5.40
        1.01   88.97    .462E+04       16.6         1.76       4.63
        1.21   89.17    .603E+04       24.5         1.99       4.10
        1.41   89.37    .753E+04       33.8         2.19       3.72
        1.61   89.57    .912E+04       44.4         2.38       3.42
        1.81   89.77    .108E+05       56.4         2.56       3.19
        2.00   89.97    .125E+05       69.9         2.72       2.99
        2.20   90.17    .144E+05       84.7         2.88       2.83
        2.40   90.37    .163E+05       99.8         3.00       2.72
        2.60   90.56    .184E+05      114.7         3.04       2.68
        2.80   90.76    .208E+05      132.8         3.13       2.61
        3.00   90.96    .235E+05      148.4         3.09       2.64
        3.20   91.16    .266E+05      170.7         3.13       2.60
        3.40   91.36    .302E+05      194.9         3.16       2.58
        3.60   91.56    .342E+05      223.5         3.20       2.55

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460) 1019.90    64.04    6.67  68.01      1.92      2.65
   OUTFLOW: ID= 1 ( 60460) 1019.90    64.09    6.67  68.01      1.92      2.65



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53         30.66
     Dep. Storage     (mm)=       2.00          5.90
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     775.42         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     123.62        118.64
               over (min)        10.00         20.00
     Storage Coeff.  (min)=      7.90 (ii)    15.75 (ii)
     Unit Hyd. Tpeak (min)=     10.00         20.00
     Unit Hyd. peak  (cms)=      0.13          0.07
                                                      *TOTALS*
     PEAK FLOW       (cms)=     14.14          5.51      18.121 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.17       6.00
     RUNOFF VOLUME    (mm)=     91.81         53.91      74.37
     TOTAL RAINFALL   (mm)=     93.81         93.81      93.81
     RUNOFF COEFFICIENT   =      0.98          0.57       0.79

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40470):    90.19  18.121     6.00    74.37
     + ID2= 2 ( 60460):  1019.90  64.093     6.67    68.01
       ================================================
       ID = 3 ( 50470):  1110.09  67.924     6.67    68.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         89.19        0.0450
                  2.00         88.89        0.0450
                  4.00         88.54        0.0450
                  6.00         88.31        0.0450
                  8.00         88.14        0.0450
                 10.00         88.02        0.0450
                 12.00         87.99        0.0450
                 14.00         87.90        0.0450
                 16.00         87.84        0.0450
                 19.00         87.55        0.0450
                 22.00         86.85        0.0450
                 25.00         86.23        0.0350      Main Channel
```

```
                  28.00         86.23        0.0350      Main Channel
                  31.00         86.60        0.0450
                  34.00         87.49        0.0450
                  37.00         88.15        0.0450
                  41.00         88.21        0.0450
                  45.00         88.29        0.0450
                  48.00         88.36        0.0450
                  50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01       0.0          0.03     307.39
        0.16   86.38    .381E+03       0.3          0.45      22.82
        0.31   86.54    .942E+03       1.0          0.65      15.77
        0.46   86.69    .167E+04       2.3          0.85      12.10
        0.61   86.84    .253E+04       4.2          1.03       9.95
        0.77   86.99    .350E+04       6.7          1.18       8.66
        0.92   87.15    .458E+04       9.8          1.32       7.78
        1.07   87.30    .576E+04      13.5          1.44       7.13
        1.22   87.45    .706E+04      17.7          1.54       6.63
        1.38   87.60    .847E+04      22.5          1.63       6.28
        1.53   87.76    .101E+05      27.8          1.69       6.05
        1.68   87.91    .119E+05      33.3          1.72       5.97
        1.83   88.06    .142E+05      39.8          1.72       5.96
        1.99   88.21    .170E+05      47.4          1.71       5.97
        2.14   88.36    .206E+05      57.3          1.71       5.99
        2.29   88.52    .247E+05      70.7          1.76       5.81
        2.44   88.67    .289E+05      86.1          1.83       5.59
        2.60   88.82    .332E+05     103.2          1.91       5.36
        2.75   88.97    .376E+05     121.7          1.99       5.15

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1110.09    67.92    6.67  68.52      2.26      1.75
   OUTFLOW: ID= 1 ( 60470) 1110.09    66.85    6.75  68.52      2.25      1.75


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82         13.61
     Dep. Storage     (mm)=       2.00          5.80
     Average Slope     (%)=       1.90          1.90
     Length            (m)=     613.35         40.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=     123.62        170.00
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       6.26 (ii)    10.98 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.19          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=      10.74          4.35        14.674 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=      91.81         62.73        79.88
     TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
     RUNOFF COEFFICIENT   =       0.98          0.67         0.85

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40480):    56.43  14.674     6.00    79.88
     + ID2= 2 ( 60470):  1110.09  66.855     6.75    68.52
       ================================================
       ID = 3 ( 50480):  1166.52  68.689     6.67    69.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         86.90        0.0450
                    2.00         86.76        0.0450
                    4.00         85.96        0.0450
                    6.00         85.44        0.0450
                    8.00         84.83        0.0450
                   10.00         84.50        0.0450
                   12.00         84.15        0.0450
                   14.00         83.85        0.0350      Main Channel
                   16.00         83.86        0.0350      Main Channel
                   18.00         83.99    0.0350 /0.0450  Main Channel
                   20.00         84.27        0.0450
                   22.00         84.55        0.0450
                   24.00         84.88        0.0450
                   26.00         85.37        0.0450
                   27.00         85.68        0.0450
                   28.00         85.91        0.0450
                   29.00         86.08        0.0450
                   30.00         86.21        0.0450
                   31.00         86.29        0.0450
                   34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03       0.3          0.48      10.34
        0.32   84.17    .460E+03       1.2          0.77       6.41
        0.48   84.33    .855E+03       2.8          0.98       5.07
        0.64   84.48    .135E+04       5.2          1.14       4.35
        0.80   84.64    .193E+04       8.3          1.28       3.88
        0.95   84.80    .261E+04      12.3          1.40       3.53
        1.11   84.96    .337E+04      17.4          1.53       3.23
        1.27   85.12    .419E+04      23.5          1.66       2.97
        1.43   85.28    .506E+04      30.5          1.79       2.77
        1.59   85.44    .599E+04      38.5          1.90       2.60
        1.75   85.60    .697E+04      47.3          2.01       2.46
        1.91   85.76    .801E+04      57.1          2.12       2.34
        2.07   85.92    .911E+04      67.8          2.21       2.24
        2.23   86.07    .103E+05      79.5          2.30       2.15
        2.39   86.23    .115E+05      91.9          2.37       2.09
        2.54   86.39    .128E+05     105.7          2.45       2.02
        2.70   86.55    .142E+05     121.2          2.53       1.95
        2.86   86.71    .156E+05     138.0          2.62       1.89
        3.02   86.87    .171E+05     153.0          2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1166.52    68.69    6.67  69.07      2.08      2.22
   OUTFLOW: ID= 1 ( 60480) 1166.52    68.61    6.75  69.07      2.08      2.21


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60         4.16
     Dep. Storage     (mm)=       2.00         6.22
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     334.28        53.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62       156.01
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.77 (ii)   12.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.38         1.14         4.399 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      91.81        60.96        79.60
     TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
     RUNOFF COEFFICIENT   =       0.98         0.65         0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40490):    16.76   4.399     6.00    79.60
     + ID2= 2 ( 60480):  1166.52  68.606     6.75    69.07
       ================================================
       ID = 3 ( 50490):  1183.28  69.076     6.75    69.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         85.84        0.0450
                    6.00         84.32        0.0450
                   12.00         84.21        0.0450
                   18.00         84.12        0.0450
                   24.00         84.08        0.0450
                   30.00         84.10        0.0450
                   36.00         84.03        0.0450
                   42.00         83.92        0.0450
                   48.00         83.88        0.0450
                   54.00         82.88        0.0350      Main Channel
                   60.00         83.12    0.0350 /0.0450  Main Channel
                   64.00         83.65        0.0450
                   68.00         83.60        0.0450
                   72.00         83.67        0.0450
                   76.00         83.70        0.0450
                   80.00         83.82        0.0450
                   84.00         83.90        0.0450
                   88.00         84.05        0.0450
                   92.00         84.16        0.0450
                  100.00         85.83        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03       0.1          0.32      46.08
        0.31   83.19    .129E+04       0.8          0.57      26.14
        0.47   83.35    .259E+04       2.3          0.79      18.75
        0.62   83.50    .418E+04       4.5          0.96      15.43
        0.78   83.66    .626E+04       7.3          1.04      14.28
        0.93   83.81    .101E+05      11.9          1.05      14.10
        1.09   83.97    .153E+05      17.6          1.02      14.55
        1.24   84.13    .231E+05      26.2          1.00      14.73
        1.40   84.28    .341E+05      41.2          1.07      13.79
        1.55   84.44    .460E+05      61.7          1.19      12.44
        1.71   84.59    .582E+05      86.6          1.32      11.21
        1.86   84.75    .706E+05     115.2          1.45      10.21
        2.02   84.90    .831E+05     147.5          1.57       9.39
        2.17   85.06    .959E+05     183.2          1.70       8.72
        2.33   85.21    .109E+06     222.2          1.81       8.16
        2.48   85.37    .122E+06     264.5          1.93       7.68
        2.64   85.52    .135E+06     310.0          2.03       7.27
        2.79   85.68    .149E+06     358.5          2.14       6.91
        2.95   85.83    .162E+06     410.1          2.24       6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1183.28    69.08    6.75  69.22      1.60      1.23
   OUTFLOW: ID= 1 ( 60490) 1183.28    67.44    6.83  69.22      1.58      1.21


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92         4.72
     Dep. Storage     (mm)=       2.00         5.43
     Average Slope     (%)=       2.10         2.10
     Length            (m)=     370.92        40.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=     123.62       169.04
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.49 (ii)    8.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.24         1.71         5.952 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=      91.81        62.66        80.51
     TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
     RUNOFF COEFFICIENT   =       0.98         0.67         0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40810):    20.64   5.952     6.00    80.51
     + ID2= 2 ( 60490):  1183.28  67.444     6.83    69.22
       ================================================
       ID = 3 ( 50810):  1203.92  67.891     6.83    69.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     123.62        90.05
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```
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       3.12 (ii)    11.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.27          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.56          1.08          1.497 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81         47.31          55.09
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.50           0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40500):     9.32   1.497     6.00    55.09
     + ID2= 2 ( 50810):  1203.92  67.891     6.83    69.41
       ==================================================
       ID = 3 ( 50500):  1213.24  68.115     6.83    69.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.499 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.465
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.090 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.212
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.631

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.153 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.415
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45          0.00
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.40          1.00
     Length            (m)=      48.30          0.00
     Mannings n           =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=     123.62         96.12
                   over (min)       5.00          5.00
     Storage Coeff.  (min)=       2.00 (ii)     2.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.31          0.31
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.00          0.154 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81         59.48          91.48
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.63           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25         13.25
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       2.00          2.00
     Length            (m)=     420.00         30.00
     Mannings n           =      0.013         0.025

     Max.Eff.Inten.(mm/hr)=     123.62        147.59
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       4.51 (ii)     6.19 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.23          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.67          4.71          7.378 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81         66.95          74.41
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.71           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(******)|     OVERFLOW IS ON

| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    1.8600      0.9862
                           0.0560      0.3250   |    2.1000      1.0580
                           0.2600      0.4718   |    2.2000      1.2000
                           0.7400      0.6512   |   10.0000      1.2500
                           1.4100      0.8427   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
    INFLOW : ID= 2 (******)     26.500     7.378      6.00      74.41
    OUTFLOW: ID= 1 (******)     26.500     2.042      6.25      74.35
    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 27.68
                    TIME SHIFT OF PEAK FLOW          (min)= 15.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.0430

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   --------------------------
   | Junction Command(30651004) |
   --------------------------

                               AREA     QPEAK   TPEAK     R.V.
                               (ha)     (cms)    (hrs)     (mm)
   INFLOW : ID= 3(30651002)    0.00      0.00    0.00      0.00
   OUTFLOW: ID= 2(30651004)    0.00      0.00    0.00      0.00

   --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
       ID1= 1 (******):    26.50   2.042     6.25    74.35
     + ID2= 2 (******):     0.00   0.000     0.00     0.00
       ==================================================
       ID = 3 (******):    26.50   2.042     6.25    74.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89          0.04
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.40          1.00
     Length            (m)=     115.50          0.00
     Mannings n           =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=     123.62         96.12
                   over (min)       5.00          5.00
     Storage Coeff.  (min)=       3.37 (ii)     3.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.26          0.26
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.33          0.01          1.337 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81         59.48          91.48
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.63           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.93   0.153     6.08    59.41
     + ID2= 2 (******):     3.93   1.337     6.00    91.48
       ==================================================
       ID = 3 (******):     4.86   1.474     6.00    85.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 3 (******):     4.86   1.474     6.00    85.35
     + ID2= 2 (******):     0.45   0.154     6.00    91.48
       ==================================================
       ID = 1 (******):     5.31   1.628     6.00    85.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     5.31   1.628     6.00    85.87
     + ID2= 2 (******):    26.50   2.042     6.25    74.35
       ==================================================
       ID = 3 (******):    31.81   2.964     6.00    76.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   1.512 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  59.476
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):    14.62   1.512     6.33    59.48
     + ID2= 2 (******):    31.81   2.964     6.00    76.27
       ==================================================
       ID = 3 (******):    46.43   3.887     6.00    70.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
```

```
                    0.00        443.75        0.0450
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.05   441.45    .114E+03        0.0         0.27      55.89
        0.11   441.50    .457E+03        0.2         0.43      35.21
        0.16   441.56    .103E+04        0.6         0.57      26.87
        0.22   441.61    .185E+04        1.4         0.67      22.84
        0.27   441.67    .297E+04        2.5         0.77      19.84
        0.33   441.72    .437E+04        4.1         0.87      17.59
        0.38   441.78    .605E+04        6.4         0.96      15.85
        0.44   441.83    .802E+04        9.2         1.05      14.47
        0.49   441.89    .103E+05       12.8         1.14      13.35
        0.55   441.94    .128E+05       17.2         1.23      12.42
        0.60   442.00    .157E+05       22.4         1.31      11.63
        0.66   442.05    .188E+05       28.3         1.38      11.07
        0.71   442.11    .225E+05       36.9         1.50      10.16
        0.78   442.17    .277E+05       48.4         1.60       9.54
        0.84   442.24    .339E+05       61.9         1.67       9.13
        0.91   442.30    .412E+05       77.1         1.71       8.90
        0.97   442.36    .495E+05       94.7         1.75       8.71
        1.03   442.43    .589E+05      114.9         1.79       8.54
        1.10   442.49    .693E+05      137.9         1.82       8.38

                                      <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     46.43     3.89    6.00  70.98      0.32      0.85
   OUTFLOW: ID= 1 (******)     46.43     3.42    6.50  70.98      0.31      0.82


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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  46.43      3.42      6.50   70.98
     ==================================================
     ID= 2  (   2)    :  31.46      1.00      6.50   70.98
     ID= 3  (   2)    :  14.97      2.42      6.50   70.98
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.044 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.211
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.631

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.044     6.00    59.21
      + ID2= 2 (******):    14.97   2.422     6.50    70.98
        ================================================
        ID = 3 (******):    15.19   2.432     6.50    70.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         433.07        0.0450
                  59.66         432.39        0.0450
                  94.25         432.03        0.0450
                 115.71         431.82        0.0450
                 143.84         431.84    0.0450 /0.0350  Main Channel
                 163.59         431.75        0.0350      Main Channel
                 177.84         431.73        0.0350      Main Channel
                 199.51         431.70        0.0350      Main Channel
                 231.74         431.53        0.0350      Main Channel
                 283.71         431.44        0.0350      Main Channel
                 294.09         431.43        0.0350      Main Channel
                 325.65         431.42        0.0350      Main Channel
                 355.24         431.24        0.0350      Main Channel
                 383.70         431.43        0.0350      Main Channel
                 476.17         432.06    0.0350 /0.0450  Main Channel
                 510.88         432.23        0.0450
                 558.61         432.37        0.0450
                 589.84         432.57        0.0450
                 622.97         432.73        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   431.32    .108E+03        0.3         0.30       6.68
        0.15   431.39    .434E+03        1.7         0.47       4.21
        0.23   431.47    .119E+04        5.0         0.50       3.99
        0.30   431.54    .252E+04       13.9         0.66       3.02
        0.38   431.62    .417E+04       29.3         0.84       2.37
        0.45   431.69    .604E+04       50.1         0.99       2.01
        0.53   431.77    .828E+04       73.9         1.06       1.87
        0.60   431.84    .109E+05      108.8         1.19       1.67
        0.68   431.92    .142E+05      159.5         1.34       1.48
        0.76   432.01    .176E+05      219.4         1.48       1.34
        0.84   432.09    .213E+05      290.0         1.62       1.22
        0.92   432.17    .252E+05      374.6         1.77       1.12
        1.01   432.25    .293E+05      469.2         1.91       1.04
        1.09   432.33    .338E+05      573.9         2.02       0.98
        1.17   432.41    .386E+05      689.9         2.13       0.93
        1.25   432.49    .435E+05      817.2         2.24       0.89
        1.33   432.57    .487E+05      955.3         2.34       0.85
        1.41   432.65    .541E+05     1103.5         2.43       0.82
        1.49   432.73    .597E+05     1262.7         2.52       0.79

--------------------------------------------------------------------------------

                                      <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     15.19     2.43    6.50  70.81      0.17      0.48
   OUTFLOW: ID= 1 (******)     15.19     2.41    6.58  70.81      0.17      0.48


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.499     6.17    59.46
      + ID2= 2 (******):     0.45   0.090     6.00    59.21
        ================================================
        ID = 3 (******):     4.32   0.562     6.17    59.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.562     6.17    59.44
      + ID2= 2 (******):    15.19   2.406     6.58    70.81
        ================================================
        ID = 1 (******):    19.51   2.740     6.50    68.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         430.79        0.0450
                  23.82         429.79    0.0450 /0.0350  Main Channel
                  44.05         429.11        0.0350      Main Channel
                  70.46         428.15        0.0350      Main Channel
                 112.31         427.60        0.0350      Main Channel
                 150.77         427.27        0.0350      Main Channel
                 179.17         427.15        0.0350      Main Channel
                 214.90         427.16        0.0350      Main Channel
                 261.89         427.25        0.0350      Main Channel
                 317.65         427.56        0.0350      Main Channel
                 382.75         427.99        0.0350      Main Channel
                 394.40         428.11        0.0350      Main Channel
                 432.80         428.07        0.0350      Main Channel
                 432.91         428.07        0.0350      Main Channel
                 462.57         428.15        0.0350      Main Channel
                 522.90         429.79    0.0350 /0.0450  Main Channel
                 585.04         429.90        0.0450
                 731.92         430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04       11.5         0.73       2.99
        0.35   427.50    .570E+04       49.9         1.15       1.91
        0.53   427.68    .105E+05      119.2         1.49       1.47
        0.70   427.85    .163E+05      221.8         1.79       1.22
        0.88   428.03    .229E+05      360.8         2.06       1.06
        1.06   428.21    .312E+05      509.7         2.14       1.02
        1.23   428.38    .405E+05      771.0         2.49       0.88
        1.41   428.56    .500E+05     1076.3         2.82       0.77
        1.58   428.73    .598E+05     1423.8         3.12       0.70
        1.76   428.91    .699E+05     1812.5         3.40       0.64
        1.94   429.09    .802E+05     2241.5         3.66       0.60
        2.11   429.26    .907E+05     2709.1         3.91       0.56
        2.29   429.44    .102E+06     3215.8         4.15       0.53
        2.46   429.61    .113E+06     3761.6         4.38       0.50
        2.64   429.79    .124E+06     4346.4         4.59       0.48
        2.85   430.00    .139E+06     5173.9         4.88       0.45
        3.06   430.20    .156E+06     6075.9         5.12       0.43
        3.26   430.41    .173E+06     7054.9         5.33       0.41
        3.47   430.62    .193E+06     8114.3         5.52       0.40

                                      <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     19.51     2.74    6.50  68.29      0.04      0.73
   OUTFLOW: ID= 1 (******)     19.51     2.73    6.58  68.29      0.04      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.159 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.415
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.127 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.310
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.632

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.127     6.00    59.31
      + ID2= 2 (******):     0.97   0.159     6.08    59.41
        ================================================
        ID = 3 (******):     1.66   0.286     6.08    59.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.286     6.08    59.37
      + ID2= 2 (******):    19.51   2.728     6.58    68.29
        ================================================
        ID = 3 (******):    21.17   2.809     6.58    67.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
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```
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   21.17      2.81      6.58    67.59
     ================================================
     ID= 2  (   2)    :  21.17      2.81      6.58    67.59
     ID= 3  (   2)    :   0.00      0.00      6.58    67.59
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.96         0.25
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.64         0.54
     Length            (m)=      63.89       157.20
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     123.62        96.12
                   over (min)      5.00        10.00
     Storage Coeff.  (min)=       2.05 (ii)    5.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.33         0.06          0.387 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        59.48          85.02
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.63           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.32         0.58
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.70         0.60
     Length            (m)=     166.18       124.91
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     123.62        96.12
                   over (min)      5.00        10.00
     Storage Coeff.  (min)=       3.54 (ii)    6.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.79         0.13          0.920 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        59.48          85.34
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.63           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (  0043)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)      (mm)
       ID1= 1 (******):     2.90   0.920     6.00    85.34
     + ID2= 2 (******):     1.21   0.387     6.00    85.02
       ================================================
       ID = 3 (  0043):     4.11   1.308     6.00    85.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.85     0.00     0.00     0.00     0.00     0.85
        0.85     1.00     0.00     0.00     0.00     1.85
        0.85   100.00     0.00     0.00     0.00   100.85

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):    4.11      1.31      6.00    85.25
     ================================================
     ID= 2  (   2)    :   3.73      0.85      6.00    85.25
     ID= 3  (   2)    :   0.38      0.46      6.00    85.25
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.00   0.000     6.58    67.59
     + ID2= 2 (******):     3.73   0.847     6.00    85.25
       ================================================
       ID = 3 (******):     3.73   0.847     6.00    85.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     5.20     0.00     0.00     0.00     5.20
        1.00     5.20     0.00     0.00     0.00     6.20
      100.00     5.20     0.00     0.00     0.00   105.20

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):    3.73      0.85      6.00    85.25
     ================================================
     ID= 2  (   2)    :   0.00      0.00      6.00    85.25
     ID= 3  (   2)    :   3.73      0.85      6.00    85.25
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.82   0.281     6.00    91.48
     + ID2= 2 (******):     0.00   0.000     6.58    67.59
       ================================================
       ID = 3 (******):     0.82   0.281     6.00    91.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)      (mm)
       ID1= 3 (******):     0.82   0.281     6.00    91.48
     + ID2= 2 (******):    14.22   2.389     6.58    67.59
       ================================================
       ID = 1 (******):    15.04   2.421     6.50    68.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.03     0.00     0.00     0.00     0.00     0.03
        0.04     0.00     0.00     0.00     0.00     0.04
        0.09     0.00     0.00     0.00     0.00     0.09
        0.12     0.00     0.00     0.00     0.00     0.13
        0.20     0.00     0.00     0.00     0.00     0.20
        0.30     0.00     0.00     0.00     0.00     0.30
        0.37     0.00     0.00     0.00     0.00     0.37
        0.43     0.00     0.00     0.00     0.00     0.43
        0.48     0.00     0.00     0.00     0.00     0.48
        0.52     0.00     0.00     0.00     0.00     0.52
        0.57     0.00     0.00     0.00     0.00     0.57
        0.67     0.00     0.00     0.00     0.00     0.67
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.81         0.01
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.50         1.00
     Length            (m)=      18.40         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     123.62        96.12
                   over (min)      5.00         5.00
     Storage Coeff.  (min)=       1.05 (ii)    1.05 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.34
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.00          0.281 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        59.48          91.48
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.63           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.82   0.281     6.00    91.48
     + ID2= 2 (******):     0.00   0.000     6.58    67.59
       ================================================
       ID = 3 (******):     0.82   0.281     6.00    91.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)      (mm)
       ID1= 3 (******):     0.82   0.281     6.00    91.48
     + ID2= 2 (******):    14.22   2.389     6.58    67.59
       ================================================
       ID = 1 (******):    15.04   2.421     6.50    68.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.03     0.00     0.00     0.00     0.00     0.03
        0.04     0.00     0.00     0.00     0.00     0.04
        0.09     0.00     0.00     0.00     0.00     0.09
        0.12     0.00     0.00     0.00     0.00     0.13
        0.20     0.00     0.00     0.00     0.00     0.20
        0.30     0.00     0.00     0.00     0.00     0.30
        0.37     0.00     0.00     0.00     0.00     0.37
        0.43     0.00     0.00     0.00     0.00     0.43
        0.48     0.00     0.00     0.00     0.00     0.48
        0.52     0.00     0.00     0.00     0.00     0.52
        0.57     0.00     0.00     0.00     0.00     0.57
        0.67     0.00     0.00     0.00     0.00     0.67
```

```
       0.68     0.00     0.00     0.00     0.00     0.68
       0.68     0.02     0.00     0.00     0.00     0.70
       0.72     0.56     0.00     0.00     0.00     1.28
       0.73     0.75     0.01     0.00     0.00     1.48
       1.10     1.87     0.54     0.00     0.00     3.51
       1.40     2.25     2.61     0.00     0.00     6.26

                          AREA     QPEAK     TPEAK     R.V.
                          (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):  15.04      2.42      6.50    68.90
     ================================================
     ID= 2  (   3)    :   8.02      0.90      6.50    68.90
     ID= 3  (   3)    :   6.20      1.26      6.50    68.90
     ID= 4  (   3)    :   0.82      0.25      6.50    68.90
     ID= 5  (   3)    :   0.00      0.00      0.00     0.00
     ID= 6  (   3)    :   0.00      0.00      0.00     0.00
-------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     6.94   0.421     6.58    67.59
     + ID2= 2 (******):     8.02   0.901     6.50    68.90
       ================================================
       ID = 3 (******):    14.96   1.322     6.50    68.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  11.36   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   1.315

     PEAK FLOW       (cms)=   1.464 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.465
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.75   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.126 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.402
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area    (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      54.14         24.23
     Dep. Storage     (mm)=       2.00          5.78
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     722.82         47.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=     123.62        133.77
                   over (min)       10.00         20.00
     Storage Coeff.  (min)=       7.93 (ii)     16.19 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.13          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=      12.78          4.91         16.372 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81         58.60         77.28
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.62          0.82


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         144.07        0.0450
                  9.00         143.84        0.0450
                 12.00         142.90        0.0450
                 15.00         142.48        0.0450
                 18.00         142.43    0.0450 /0.0350  Main Channel
                 21.00         142.31        0.0350      Main Channel
                 24.00         142.12        0.0350      Main Channel
                 27.00         142.44    0.0350 /0.0450  Main Channel
                 30.00         142.71        0.0450
                 33.00         143.18        0.0450
                 36.00         143.27        0.0450
                 37.00         143.36        0.0450
                 38.00         143.64        0.0450
                 39.00         143.92        0.0450
                 40.00         143.93        0.0450
                 45.00         144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.08   142.20    .282E+02       0.0          0.24       26.26
        0.16   142.27    .113E+03       0.1          0.38       16.54
        0.23   142.35    .257E+03       0.3          0.48       13.09
        0.31   142.43    .477E+03       0.7          0.57       11.02
        0.42   142.54    .969E+03       2.0          0.76        8.24
        0.53   142.65    .157E+04       3.8          0.92        6.80
        0.64   142.76    .224E+04       6.3          1.06        5.90
        0.75   142.87    .299E+04       9.5          1.19        5.26
        0.86   142.98    .379E+04      13.2          1.31        4.77
        0.97   143.09    .463E+04      17.6          1.43        4.37
        1.08   143.20    .552E+04      22.5          1.53        4.09
        1.19   143.31    .653E+04      27.9          1.60        3.90
        1.30   143.42    .761E+04      34.4          1.70        3.69
        1.41   143.53    .874E+04      41.7          1.79        3.49
        1.52   143.64    .989E+04      49.7          1.89        3.32
        1.63   143.75    .111E+05      58.3          1.98        3.17
        1.74   143.85    .123E+05      66.9          2.04        3.06
        1.85   143.96    .137E+05      73.2          2.01        3.11
        1.96   144.07    .153E+05      81.5          2.00        3.13

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                           (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 40600)   78.37    16.37     6.00  77.28       0.94      1.39
   OUTFLOW: ID= 1 ( 60600)   78.37    15.89     6.08  77.28       0.92      1.38


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area    (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75          2.18
     Dep. Storage     (mm)=       2.00          8.00
     Average Slope     (%)=       2.90          2.90
     Length            (m)=     162.03         40.00
     Mannings n           =      0.015         0.340

     Max.Eff.Inten.(mm/hr)=     123.62        104.20
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       2.48 (ii)     9.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.29          0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.43          0.45          0.882 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81         51.06         63.94
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.54          0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40610):     3.94   0.882     6.00    63.94
     + ID2= 2 ( 60600):    78.37  15.890     6.08    77.28
       ================================================
       ID = 3 ( 50600):    82.31  16.439     6.08    76.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         143.40        0.0450
                  2.00         142.92        0.0450
                  4.00         142.14        0.0450
                  6.00         141.49        0.0450
                  8.00         141.11        0.0450
                 10.00         141.00    0.0450 /0.0350  Main Channel
                 12.00         140.98        0.0350      Main Channel
                 14.00         140.82        0.0350      Main Channel
                 16.00         141.02    0.0350 /0.0450  Main Channel
                 18.00         141.19        0.0450
                 20.00         141.19        0.0450
                 22.00         141.44        0.0450
                 24.00         142.00        0.0450
                 26.00         142.20        0.0450
                 28.00         142.39        0.0450
                 30.00         142.96        0.0450
                 31.00         143.13        0.0450
                 32.00         143.28        0.0450
                 33.00         143.41        0.0450
                 34.00         143.44        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.09   140.91    .314E+02       0.0          0.24       23.12
        0.18   141.00    .132E+03       0.1          0.31       17.83
        0.33   141.14    .502E+03       0.9          0.58        9.54
        0.47   141.29    .107E+04       2.4          0.74        7.47
        0.61   141.43    .175E+04       4.7          0.89        6.20
        0.75   141.57    .251E+04       7.9          1.05        5.31
        0.89   141.71    .332E+04      11.8          1.19        4.68
        1.03   141.85    .416E+04      16.5          1.32        4.21
        1.17   141.99    .506E+04      21.8          1.44        3.86
        1.31   142.13    .601E+04      27.5          1.52        3.64
        1.45   142.27    .705E+04      34.0          1.61        3.46
        1.59   142.41    .818E+04      41.5          1.69        3.29
        1.73   142.55    .936E+04      50.2          1.79        3.11
        1.88   142.69    .106E+05      59.8          1.88        2.95
        2.02   142.84    .118E+05      70.2          1.97        2.81
        2.16   142.98    .132E+05      81.2          2.06        2.70
        2.30   143.12    .145E+05      92.6          2.12        2.61
        2.44   143.26    .159E+05     104.8          2.19        2.54
        2.58   143.40    .174E+05     117.7          2.24        2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                           (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50600)   82.31    16.44     6.08  76.64       1.03      1.32
   OUTFLOW: ID= 1 ( 60610)   82.31    15.41     6.17  76.64       0.99      1.28


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40620)|   Area    (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30          1.37
     Dep. Storage     (mm)=       2.00          5.59
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     194.41         43.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62        161.04
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       3.37 (ii)    10.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.26          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.17          0.42          1.555 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      91.81         61.92         80.05
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.66          0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40620):     5.67   1.555     6.00    80.05
     + ID2= 2 ( 60610):    82.31  15.412     6.17    76.64
       ================================================
       ID = 3 ( 50610):    87.98  16.111     6.08    76.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         142.03        0.0450
```

```
                  1.00        141.71        0.0450
                  2.00        141.35        0.0450
                  3.00        141.01        0.0450
                  4.00        140.79        0.0450
                  5.00        140.56        0.0450
                  6.00        140.44        0.0450
                  7.00        140.30    0.0450 /0.0350  Main Channel
                  8.00        140.08        0.0350      Main Channel
                  9.00        139.88        0.0350      Main Channel
                 10.00        139.97        0.0350      Main Channel
                 11.00        140.12        0.0350      Main Channel
                 12.00        140.35    0.0350 /0.0450  Main Channel
                 13.00        140.52        0.0450
                 14.00        140.73        0.0450
                 15.00        140.97        0.0450
                 16.00        141.27        0.0450
                 17.00        141.57        0.0450
                 18.00        141.89        0.0450
                 19.00        142.07        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02        0.0         0.36       8.21
        0.21   140.09    .579E+02        0.2         0.59       5.04
        0.31   140.19    .120E+03        0.5         0.78       3.79
        0.42   140.30    .200E+03        1.1         0.95       3.12
        0.53   140.41    .313E+03        2.1         1.18       2.51
        0.65   140.53    .456E+03        3.5         1.36       2.18
        0.76   140.65    .630E+03        5.3         1.50       1.98
        0.88   140.76    .826E+03        7.6         1.63       1.82
        0.99   140.88    .104E+04       10.3         1.75       1.69
        1.11   140.99    .128E+04       13.4         1.87       1.59
        1.23   141.11    .154E+04       17.1         1.98       1.50
        1.34   141.22    .180E+04       21.2         2.09       1.42
        1.46   141.34    .209E+04       25.8         2.20       1.35
        1.57   141.45    .239E+04       30.9         2.30       1.29
        1.69   141.57    .270E+04       36.4         2.40       1.24
        1.80   141.69    .303E+04       42.4         2.49       1.19
        1.92   141.80    .337E+04       48.9         2.58       1.15
        2.04   141.92    .373E+04       55.9         2.67       1.11
        2.15   142.03    .411E+04       63.2         2.74       1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98    16.11    6.08  76.86      1.19      1.95
   OUTFLOW: ID= 1 ( 60620)   87.98    16.25    6.17  76.86      1.20      1.96



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=     123.62       102.15
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.42 (ii)   11.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.30         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.23         0.22          0.428 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81        51.89          64.50
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.55           0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40640):     2.13   0.428     6.00    64.50
      + ID2= 2 ( 60620):    87.98  16.250     6.17    76.86
        ================================================
        ID = 3 ( 50630):    90.11  16.493     6.17    76.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     123.62       121.96
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       5.07 (ii)   12.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.21         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.59         1.58          4.984 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81        57.25          75.45
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.61           0.80


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40630):    20.54   4.984     6.00    75.45
      + ID2= 2 ( 50630):    90.11  16.493     6.17    76.57
        ================================================
        ID = 3 ( 50640):   110.65  19.240     6.08    76.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    3.4010      4.4390
                         0.0530      0.4910   |    4.8380      5.5060
                         0.0890      0.7040   |    5.8470      5.5380
                         0.2040      1.0890   |    6.5980      5.9190
                         0.3240      1.4800   |    7.2560      6.2250
                         0.3890      1.7490   |    7.9030      6.4820
                         0.4470      1.9970   |    8.4910      6.6820
                         0.5090      2.3490   |   12.0680      7.1150
                         0.7420      2.9150   |   20.0000      7.2000
                         1.7580      3.6690   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50640)    110.646     19.240      6.08      76.36
   OUTFLOW: ID= 1 (******)    110.646      4.185      6.92      76.33
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.75
                  TIME SHIFT OF PEAK FLOW         (min)= 50.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  5.0252

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30651003) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651001)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2(30651003)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):   110.65   4.185     6.92    76.33
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):   110.65   4.185     6.92    76.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):   110.65   4.185     6.92    76.33
      + ID2= 2 (******):     0.75   0.126     6.08    59.40
        ================================================
        ID = 1 (******):   111.40   4.205     6.83    76.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.36   1.464     6.17    59.46
      + ID2= 2 (******):   111.40   4.205     6.83    76.21
        ================================================
        ID = 3 (******):   122.76   4.888     6.58    74.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation        Manning
                  0.00        447.10         0.0450
                 42.83        446.80         0.0450
                 42.89        446.80         0.0450
                 43.24        446.79         0.0450
                122.57        446.48         0.0450
                154.02        446.22         0.0450
                191.79        446.32    0.0450 /0.0350  Main Channel
                199.05        442.27         0.0350      Main Channel
                199.74        442.33         0.0350      Main Channel
                212.02        444.19         0.0350      Main Channel
                232.17        444.54    0.0350 /0.0450  Main Channel
                348.58        444.42         0.0450
                359.23        444.30         0.0450
                381.33        444.03         0.0450
                483.65        444.18         0.0450
                548.64        445.87         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.19   442.46    .184E+03        0.1         0.65      24.29
        0.38   442.65    .662E+03        0.7         1.01      15.64
        0.57   442.84    .143E+04        2.0         1.31      12.09
        0.76   443.03    .247E+04        4.1         1.57      10.05
        0.95   443.22    .381E+04        7.3         1.81       8.70
        1.14   443.41    .543E+04       11.7         2.04       7.73
        1.33   443.60    .733E+04       17.5         2.26       6.99
        1.52   443.79    .952E+04       24.8         2.46       6.41
        1.71   443.98    .120E+05       33.7         2.66       5.93
        1.89   444.16    .211E+05       47.0         2.11       7.49
        2.08   444.35    .469E+05       73.0         1.47      10.71
        2.27   444.54    .855E+05      117.6         1.30      12.12
        2.46   444.73    .140E+06      240.0         1.62       9.75
        2.65   444.92    .197E+06      400.4         1.92       8.20
        2.84   445.11    .255E+06      595.0         2.21       7.13
        3.03   445.30    .314E+06      821.8         2.48       6.37
        3.22   445.49    .374E+06     1079.2         2.73       5.78
        3.41   445.68    .436E+06     1366.3         2.96       5.32
        3.60   445.87    .500E+06     1682.3         3.19       4.95

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  122.76     4.89    6.58  74.66      0.80      1.62
   OUTFLOW: ID= 1 (******)  122.76     4.77    6.75  74.66      0.80      1.61



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.081 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.342
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.45   0.081     6.08    59.34
      + ID2= 2 (******):   122.76   4.774     6.75    74.66
        ================================================
        ID = 3 (******):   123.21   4.787     6.75    74.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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```

```
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   2.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.27

      Unit Hyd Qpeak  (cms)=   0.310

      PEAK FLOW       (cms)=   0.320 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.446
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.39   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.083

      PEAK FLOW       (cms)=   0.072 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  59.310
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.632

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.39   0.072     6.00    59.31
       + ID2= 2 (******):     2.19   0.320     6.08    59.45
         ================================================
         ID = 3 (******):     2.58   0.391     6.08    59.43

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     2.58   0.391     6.08    59.43
       + ID2= 2 (******):   123.21   4.787     6.75    74.61
         ================================================
         ID = 1 (******):   125.79   4.892     6.75    74.29

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
```

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	429.12	0.0450	
37.54	428.86	0.0450	
53.31	428.70	0.0450	
81.17	428.24	0.0450	
99.28	428.15	0.0450 /0.0350	Main Channel
114.53	427.72	0.0350	Main Channel
119.88	426.51	0.0350	Main Channel
124.17	425.84	0.0350	Main Channel
206.01	425.90	0.0350	Main Channel
209.64	426.51	0.0350	Main Channel
214.21	426.89	0.0350	Main Channel
231.49	427.17	0.0350	Main Channel
268.61	427.89	0.0350 /0.0450	Main Channel
351.58	428.15	0.0450	
368.27	428.31	0.0450	
405.75	428.52	0.0450	
416.79	428.59	0.0450	
440.06	428.76	0.0450	
469.88	428.97	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	426.00	.218E+04	4.1	0.39	8.87
0.31	426.16	.495E+04	15.8	0.67	5.22
0.47	426.32	.779E+04	33.2	0.89	3.92
0.63	426.47	.107E+05	55.4	1.08	3.22
0.79	426.63	.137E+05	81.8	1.25	2.78
0.94	426.79	.167E+05	112.4	1.40	2.48
1.10	426.95	.199E+05	144.6	1.52	2.29
1.26	427.10	.233E+05	176.4	1.58	2.20
1.42	427.26	.271E+05	214.5	1.65	2.11
1.57	427.42	.312E+05	258.4	1.73	2.01
1.73	427.58	.356E+05	307.7	1.81	1.93
1.89	427.73	.402E+05	362.0	1.88	1.85
2.05	427.89	.452E+05	415.1	1.91	1.82
2.23	428.07	.525E+05	501.3	1.99	1.74
2.41	428.25	.621E+05	609.1	2.05	1.70
2.59	428.43	.733E+05	739.1	2.10	1.65
2.77	428.61	.862E+05	886.8	2.15	1.62
2.95	428.79	.101E+06	1053.9	2.19	1.59
3.13	428.97	.116E+06	1240.2	2.22	1.57

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (******)	125.79	4.89	6.75	74.29	0.17	0.40
OUTFLOW: ID= 1 (******)	125.79	4.79	6.92	74.29	0.17	0.40

```
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.29

      Unit Hyd Qpeak  (cms)=   0.341

      PEAK FLOW       (cms)=   0.363 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  59.454
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
```

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	443.75	0.0000	
8.50	443.74	0.0450	
35.47	443.64	0.0450	
64.60	443.29	0.0450	
74.71	443.18	0.0450	
80.25	443.17	0.0450	
112.17	443.12	0.0450 /0.0350	Main Channel
131.57	442.76	0.0350	Main Channel
137.50	442.66	0.0350	Main Channel
137.91	442.67	0.0350	Main Channel
152.28	442.24	0.0350	Main Channel
167.40	441.39	0.0350	Main Channel
178.29	441.56	0.0350	Main Channel
216.75	442.01	0.0350	Main Channel
221.54	442.05	0.0350 /0.0450	Main Channel
334.66	442.50	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.05	441.45	.216E+02	0.0	0.17	16.51
0.11	441.50	.864E+02	0.1	0.28	10.40
0.16	441.56	.194E+03	0.4	0.36	7.94
0.22	441.61	.350E+03	0.9	0.43	6.75
0.27	441.67	.561E+03	1.6	0.49	5.86
0.33	441.72	.825E+03	2.6	0.55	5.20
0.38	441.78	.114E+04	4.1	0.62	4.68
0.44	441.83	.152E+04	5.9	0.67	4.27
0.49	441.89	.194E+04	8.2	0.73	3.94
0.55	441.94	.242E+04	11.0	0.79	3.67
0.60	442.00	.296E+04	14.3	0.84	3.44
0.66	442.05	.355E+04	18.1	0.88	3.27
0.71	442.11	.425E+04	23.6	0.96	3.00
0.78	442.17	.523E+04	31.0	1.02	2.82
0.84	442.24	.641E+04	39.6	1.07	2.70
0.91	442.30	.778E+04	49.3	1.10	2.63
0.97	442.36	.935E+04	60.5	1.12	2.57
1.03	442.43	.111E+05	73.5	1.14	2.52
1.10	442.49	.131E+05	88.2	1.16	2.47

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (******)	31.46	1.00	6.50	70.98	0.23	0.44
OUTFLOW: ID= 1 (******)	31.46	1.00	7.00	70.98	0.23	0.44

```
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.46

      Unit Hyd Qpeak  (cms)=   0.352

      PEAK FLOW       (cms)=   0.432 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  59.476
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     4.24   0.432     6.33    59.48
       + ID2= 2 (******):    31.46   1.000     7.00    70.98
         ================================================
         ID = 3 (******):    35.70   1.429     6.33    69.62

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     2.59   0.363     6.17    59.45
       + ID2= 2 (******):    35.70   1.429     6.33    69.62
         ================================================
         ID = 3 (******):    38.29   1.755     6.25    68.93

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
```

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	429.12	0.0500	
37.54	428.86	0.0500	
53.31	428.70	0.0500	
81.17	428.24	0.0500	
99.28	428.15	0.0500 /0.0300	Main Channel
114.53	427.72	0.0300	Main Channel
119.88	426.51	0.0300	Main Channel
124.17	425.84	0.0300	Main Channel
206.01	425.90	0.0300	Main Channel
209.64	426.51	0.0300	Main Channel
214.21	426.89	0.0300	Main Channel
231.49	427.17	0.0300	Main Channel
268.61	427.89	0.0300 /0.0500	Main Channel
351.58	428.15	0.0500	
368.27	428.31	0.0500	
405.75	428.52	0.0500	
416.79	428.59	0.0500	
440.06	428.76	0.0500	
469.88	428.97	0.0500	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	426.00	.187E+04	9.2	0.88	3.40
0.31	426.16	.424E+04	35.4	1.49	2.00
0.47	426.32	.666E+04	74.1	1.98	1.50
0.63	426.47	.914E+04	123.7	2.41	1.23
0.79	426.63	.117E+05	182.8	2.79	1.07
0.94	426.79	.143E+05	251.2	3.13	0.95
1.10	426.95	.170E+05	323.1	3.39	0.88
1.26	427.10	.199E+05	394.0	3.52	0.84
1.42	427.26	.232E+05	479.1	3.69	0.81
1.57	427.42	.267E+05	577.3	3.86	0.77
1.73	427.58	.304E+05	687.4	4.03	0.74
1.89	427.73	.344E+05	808.6	4.20	0.71
2.05	427.89	.387E+05	927.4	4.28	0.70
2.23	428.07	.449E+05	1119.2	4.45	0.67
2.41	428.25	.531E+05	1356.2	4.56	0.65
2.59	428.43	.627E+05	1638.9	4.66	0.64
2.77	428.61	.737E+05	1955.8	4.73	0.63
2.95	428.79	.859E+05	2310.2	4.79	0.62
3.13	428.97	.996E+05	2701.5	4.84	0.61

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (******)	38.29	1.75	6.25	68.93	0.03	0.88
OUTFLOW: ID= 1 (******)	38.29	1.74	6.33	68.93	0.03	0.88

```
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):   125.79   4.792     6.92    74.29
       + ID2= 2 (******):    38.29   1.739     6.33    68.93
         ================================================
         ID = 3 (******):   164.08   6.176     6.83    73.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB             |
| STANDHYD (******)|   Area     (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
 --------------------
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.98	3.60
Dep. Storage (mm)=	2.00	4.48

```
      Average Slope     (%)=       0.91         1.12
      Length            (m)=     246.54       157.18
      Mannings n           =      0.015        0.300

      Max.Eff.Inten.(mm/hr)=     123.62        59.21
                    over (min)       5.00        35.00
      Storage Coeff.  (min)=       4.52 (ii)   30.79 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.23         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.67         0.35          1.834 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      91.81        59.48         78.23
      TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
      RUNOFF COEFFICIENT   =       0.98         0.63          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     8.58   1.834     6.00    78.23
      + ID2= 2 (******):    14.96   1.322     6.50    68.29
        ================================================
        ID = 3 ( 50650):    23.54   2.919     6.00    71.91

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50650):    23.54   2.919     6.00    71.91
      + ID2= 2 (******):   164.08   6.176     6.83    73.04
        ================================================
        ID = 1 ( 50650):   187.62   7.788     6.75    72.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        129.45        0.0450
                   6.00        129.24        0.0450
                   8.00        128.92        0.0450
                  10.00        128.26        0.0450
                  12.00        127.37        0.0450
                  14.00        126.79        0.0450
                  16.00        126.20        0.0450
                  18.00        125.80        0.0450
                  21.00        125.29        0.0450
                  24.00        124.85        0.0450
                  27.00        124.54        0.0350      Main Channel
                  30.00        124.62        0.0350      Main Channel
                  33.00        124.84    0.0350 /0.0450  Main Channel
                  36.00        125.26        0.0450
                  39.00        125.86        0.0450
                  42.00        126.49        0.0450
                  48.00        128.97        0.0450
                  54.00        129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.26   124.80    .390E+03       0.9         0.76       7.18
       0.51   125.06    .124E+04       4.9         1.29       4.21
       0.77   125.31    .239E+04      12.3         1.67       3.25
       1.03   125.57    .380E+04      23.2         1.99       2.73
       1.28   125.83    .544E+04      37.9         2.27       2.40
       1.54   126.08    .731E+04      56.6         2.52       2.15
       1.80   126.34    .937E+04      79.6         2.77       1.96
       2.05   126.60    .116E+05     107.2         3.01       1.81
       2.31   126.85    .140E+05     139.3         3.25       1.67
       2.57   127.11    .165E+05     175.4         3.47       1.57
       2.82   127.37    .191E+05     215.7         3.68       1.48
       3.08   127.62    .219E+05     261.1         3.89       1.39
       3.34   127.88    .247E+05     310.7         4.10       1.32
       3.59   128.14    .276E+05     364.3         4.30       1.26
       3.85   128.40    .307E+05     421.6         4.48       1.21
       4.11   128.65    .338E+05     482.7         4.65       1.17
       4.36   128.91    .371E+05     548.1         4.82       1.13
       4.62   129.17    .406E+05     600.9         4.83       1.13
       4.88   129.42    .446E+05     634.1         4.63       1.17

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50650)  187.62     7.79    6.75  72.90       0.61      1.42
   OUTFLOW: ID= 1 ( 60650)  187.62     7.78    6.83  72.90       0.61      1.41



--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=     37.06        13.71
      Dep. Storage     (mm)=      2.00         6.10
      Average Slope     (%)=      1.50         1.50
      Length            (m)=    581.73        82.00
      Mannings n           =     0.015        0.280

      Max.Eff.Inten.(mm/hr)=    123.62        82.91
                    over (min)      5.00        25.00
      Storage Coeff.  (min)=      6.51 (ii)   20.17 (ii)
      Unit Hyd. Tpeak (min)=      5.00        25.00
      Unit Hyd. peak  (cms)=      0.18         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=     11.72         1.55         12.657 (iii)
      TIME TO PEAK    (hrs)=      6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=     91.81        51.17         80.43
      TOTAL RAINFALL   (mm)=     93.81        93.81         93.81
      RUNOFF COEFFICIENT   =      0.98         0.55          0.86

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40670):    50.76  12.657     6.00    80.43
      + ID2= 2 ( 60650):   187.62   7.779     6.83    72.90
        ================================================
        ID = 3 ( 50670):   238.38  17.167     6.00    74.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        115.77        0.0450
                  20.00        115.51        0.0450
                  24.00        114.73        0.0450
                  28.00        113.17    0.0450 /0.0350  Main Channel
                  32.00        113.16    0.0350 /0.0450  Main Channel
                  36.00        114.68        0.0450
                  40.00        115.05        0.0450
                  44.00        115.27        0.0450
                  48.00        115.46        0.0450
                  52.00        115.71        0.0450
                  54.00        115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.14   113.30    .275E+03       0.3         0.60      13.60
       0.27   113.43    .612E+03       1.2         0.93       8.76
       0.41   113.57    .996E+03       2.4         1.18       6.88
       0.55   113.71    .143E+04       4.1         1.39       5.85
       0.69   113.84    .191E+04       6.1         1.57       5.18
       0.82   113.98    .244E+04       8.6         1.73       4.70
       0.96   114.12    .301E+04      11.6         1.87       4.34
       1.10   114.26    .363E+04      14.9         2.00       4.06
       1.24   114.39    .430E+04      18.8         2.12       3.82
       1.37   114.53    .502E+04      23.1         2.24       3.63
       1.51   114.67    .579E+04      27.9         2.34       3.46
       1.65   114.81    .664E+04      32.5         2.38       3.41
       1.78   114.94    .763E+04      37.8         2.41       3.36
       1.92   115.08    .878E+04      44.0         2.44       3.33
       2.06   115.22    .101E+05      50.8         2.45       3.31
       2.20   115.35    .117E+05      58.8         2.46       3.30
       2.33   115.49    .134E+05      68.1         2.47       3.29
       2.47   115.63    .157E+05      74.2         2.30       3.53
       2.61   115.77    .188E+05      85.0         2.20       3.69

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50670)  238.38    17.17    6.00  74.50       1.18      2.07
   OUTFLOW: ID= 1 ( 60670)  238.38    15.61    6.00  74.50       1.12      2.02



--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      6.22         4.63
      Dep. Storage     (mm)=      2.00         8.04
      Average Slope     (%)=      2.30         2.30
      Length            (m)=    269.03        47.00
      Mannings n           =     0.015        0.350

      Max.Eff.Inten.(mm/hr)=    123.62        90.60
                    over (min)      5.00        15.00
      Storage Coeff.  (min)=      3.61 (ii)   13.10 (ii)
      Unit Hyd. Tpeak (min)=      5.00        15.00
      Unit Hyd. peak  (cms)=      0.25         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=      2.03         0.72          2.658 (iii)
      TIME TO PEAK    (hrs)=      6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=     91.81        51.60         73.76
      TOTAL RAINFALL   (mm)=     93.81        93.81         93.81
      RUNOFF COEFFICIENT   =      0.98         0.55          0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40700):    10.86   2.658     6.00    73.76
      + ID2= 2 ( 60670):   238.38  15.606     6.00    74.50
        ================================================
        ID = 3 ( 50680):   249.24  18.264     6.00    74.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      0.50         0.69
      Dep. Storage     (mm)=      2.00         7.98
      Average Slope     (%)=      0.60         0.60
      Length            (m)=     89.27        69.00
      Mannings n           =     0.015        0.350

      Max.Eff.Inten.(mm/hr)=    123.62        69.22
                    over (min)      5.00        25.00
      Storage Coeff.  (min)=      2.78 (ii)   22.70 (ii)
      Unit Hyd. Tpeak (min)=      5.00        25.00
      Unit Hyd. peak  (cms)=      0.28         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=      0.16         0.08          0.204 (iii)
      TIME TO PEAK    (hrs)=      6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=     91.81        50.77         66.73
      TOTAL RAINFALL   (mm)=     93.81        93.81         93.81
      RUNOFF COEFFICIENT   =      0.98         0.54          0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      7.93        17.56
      Dep. Storage     (mm)=      2.00         8.01
      Average Slope     (%)=      3.10         3.10
      Length            (m)=    412.26        40.00
      Mannings n           =     0.015        0.350

      Max.Eff.Inten.(mm/hr)=    123.62        85.88
                    over (min)      5.00        15.00
      Storage Coeff.  (min)=      4.26 (ii)   12.31 (ii)
      Unit Hyd. Tpeak (min)=      5.00        15.00
      Unit Hyd. peak  (cms)=      0.23         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=      2.36         2.62          4.647 (iii)
      TIME TO PEAK    (hrs)=      6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=     91.81        48.83         60.65
      TOTAL RAINFALL   (mm)=     93.81        93.81         93.81
      RUNOFF COEFFICIENT   =      0.98         0.52          0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
```

```
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.204     6.00    66.73
      + ID2= 2 ( 40690):    25.49   4.647     6.00    60.65
        ==================================================
        ID = 3 ( 50690):    26.69   4.851     6.00    60.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   249.24  18.264     6.00    74.47
      + ID2= 2 ( 50690):    26.69   4.851     6.00    60.92
        ==================================================
        ID = 3 ( 50700):   275.93  23.115     6.00    73.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         109.54        0.0450
                    4.00         108.85        0.0450
                    8.00         108.76        0.0450
                   12.00         108.31        0.0450
                   16.00         107.44        0.0450
                   20.00         107.22        0.0450
                   24.00         107.06        0.0450
                   28.00         107.10        0.0450
                   32.00         107.04        0.0450
                   36.00         106.98        0.0450
                   40.00         106.83        0.0350      Main Channel
                   44.00         106.49        0.0350      Main Channel
                   48.00         106.92    0.0350 /0.0450  Main Channel
                   52.00         107.19        0.0450
                   56.00         107.11        0.0450
                   60.00         107.14        0.0450
                   64.00         107.27        0.0450
                   68.00         107.71        0.0450
                   72.00         108.37        0.0450
                   80.00         109.55        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)      (cu.m.)      (cms)       (m/s)      (min)
         0.12   106.60    .128E+03       0.1        0.43      35.47
         0.23   106.72    .513E+03       0.4        0.69      22.34
         0.35   106.83    .115E+04       1.1        0.90      17.05
         0.52   107.00    .277E+04       3.6        1.21      12.69
         0.69   107.17    .675E+04       8.9        1.21      12.64
         0.86   107.34    .135E+05      19.9        1.35      11.35
         1.02   107.51    .211E+05      36.3        1.58       9.70
         1.19   107.68    .291E+05      57.8        1.82       8.39
         1.36   107.85    .375E+05      84.0        2.06       7.43
         1.53   108.02    .461E+05     114.5        2.28       6.71
         1.70   108.19    .550E+05     149.1        2.49       6.15
         1.87   108.35    .642E+05     187.4        2.68       5.71
         2.04   108.52    .737E+05     228.8        2.85       5.37
         2.21   108.69    .837E+05     274.1        3.01       5.09
         2.37   108.86    .942E+05     316.2        3.08       4.97
         2.54   109.03    .105E+06     372.6        3.25       4.72
         2.71   109.20    .117E+06     433.4        3.40       4.50
         2.88   109.37    .129E+06     498.6        3.55       4.31
         3.05   109.54    .141E+06     568.2        3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  275.93    23.12    6.00  73.16      0.89      1.39
   OUTFLOW: ID= 1 ( 60700)  275.93    17.22    6.17  73.16      0.81      1.31


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n           =      0.015        0.360

     Max.Eff.Inten.(mm/hr)=     123.62        87.15
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.62 (ii)   10.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.45         0.77          1.136 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      91.81        49.27         58.10
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.53          0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   1.136     6.00    58.10
      + ID2= 2 ( 60700):   275.93  17.220     6.17    73.16
        ==================================================
        ID = 3 ( 50710):   282.28  18.003     6.17    72.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     123.62        89.88
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.28 (ii)    7.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.05         0.79          7.840 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81        50.27         81.42
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.54          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.2230      0.3310
                           0.0580      0.0840   |    0.2500      0.3590
                           0.0780      0.1040   |    0.2790      0.3870
                           0.0930      0.1240   |    0.3090      0.4160
                           0.1060      0.1440   |    0.3750      0.4780
                           0.1180      0.1640   |    0.4110      0.5120
                           0.1280      0.1840   |    0.4470      0.5450
                           0.1590      0.2550   |    0.5250      0.6130
                           0.1770      0.2790   |    0.7390      0.9130
                           0.1990      0.3030   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155     4.258      6.00      81.42
   OUTFLOW: ID= 1 ( 70160)     14.155     0.561      6.50      81.40
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                   TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                   CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                   PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.17
                   TIME SHIFT OF PEAK FLOW         (min)= 30.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.6643

--------------------------------------------------------------------------------

   ---------------------------
   | Junction Command(70161) |
   ---------------------------

                               AREA     QPEAK   TPEAK     R.V.
                               (ha)     (cms)    (hrs)     (mm)
   INFLOW : ID= 3( 70160)     0.00      0.00     0.00      0.00
   OUTFLOW: ID= 2( 70161)     0.00      0.00     0.00      0.00

   --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   282.28  18.003     6.17    72.82
      + ID2= 2 ( 70150):    25.04   0.924     6.58    85.36
        ==================================================
        ID = 3 ( 50730):   307.32  18.882     6.17    73.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   307.32  18.882     6.17    73.84
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50730):   307.32  18.882     6.17    73.84
```

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48655>
48656>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
48657> ---------------------------------------------------------------------------
48658>
48659> --------------------
48660> | ADD HYD  ( 50730)|
48661> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
48662> --------------------         (ha)    (cms)    (hrs)     (mm)
48663>        ID1= 1 ( 50730):   307.32  18.882     6.17    73.84
48664>      + ID2= 2 ( 70160):    14.15   0.561     6.50    81.40
48665>        ====================================================
48666>        ID = 3 ( 50730):   321.47  19.426     6.17    74.18
48667>
48668>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
48669> ---------------------------------------------------------------------------
48670>
48671> --------------------
48672> | ADD HYD  ( 50730)|
48673> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
48674> --------------------         (ha)    (cms)    (hrs)     (mm)
48675> *** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
48676> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
48677>        ID1= 3 ( 50730):   321.47  19.426     6.17    74.18
48678>      + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
48679>        ====================================================
48680>        ID = 1 ( 50730):   321.47  19.426     6.17    74.18
48681>
48682>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
48683> ---------------------------------------------------------------------------
48684> --------------------
48685> | ROUTE CHN( 60730)|
48686> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
48687> --------------------
48688>                <------ DATA FOR SECTION (   1.1) ------>
48689>                Distance      Elevation       Manning
48690>                    0.00         96.28        0.0450
48691>                    9.00         95.39        0.0450
48692>                   12.00         94.87        0.0450
48693>                   15.00         94.17        0.0450
48694>                   18.00         93.95        0.0450
48695>                   21.00         94.01        0.0450
48696>                   24.00         93.92        0.0450
48697>                   27.00         93.98    0.0450 /0.0350  Main Channel
48698>                   30.00         93.33        0.0350      Main Channel
48699>                   32.00         93.73    0.0350 /0.0450  Main Channel
48700>                   34.00         94.58        0.0450
48701>                   35.00         95.06        0.0450
48702>                   40.00         95.32        0.0450
48703>                   45.00         96.12        0.0450
48704>
48705>       <--------------------- TRAVEL TIME TABLE ---------------------->
48706>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
48707>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
48708>         0.13   93.46    .164E+03       0.0         0.36       89.51
48709>         0.26   93.60    .654E+03       0.2         0.57       56.39
48710>         0.40   93.73    .147E+04       0.6         0.75       43.03
48711>         0.55   93.88    .274E+04       1.4         0.99       32.63
48712>         0.70   94.03    .550E+04       2.8         1.00       32.28
48713>         0.85   94.18    .104E+05       5.8         1.08       29.94
48714>         1.00   94.33    .159E+05      10.1         1.24       26.04
48715>         1.15   94.48    .216E+05      15.6         1.41       22.97
48716>         1.29   94.63    .275E+05      22.2         1.57       20.64
48717>         1.44   94.78    .338E+05      29.9         1.72       18.84
48718>         1.59   94.93    .404E+05      38.6         1.86       17.44
48719>         1.74   95.08    .473E+05      48.0         1.97       16.40
48720>         1.89   95.23    .549E+05      58.1         2.05       15.76
48721>         2.04   95.38    .637E+05      70.1         2.14       15.14
48722>         2.19   95.53    .731E+05      83.0         2.21       14.67
48723>         2.34   95.68    .833E+05      97.5         2.27       14.23
48724>         2.49   95.83    .941E+05     113.5         2.34       13.82
48725>         2.64   95.98    .106E+06     131.2         2.41       13.42
48726>         2.79   96.13    .118E+06     150.7         2.48       13.05
48727>
48728>                                    <---- hydrograph ---->   <-pipe / channel->
48729>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
48730>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
48731>    INFLOW : ID= 2 ( 50730)  321.47    19.43    6.17  74.18      1.23      1.50
48732>    OUTFLOW: ID= 1 ( 60730)  321.47    14.38    6.50  74.17      1.11      1.36
48733>
48734>
48735>
48736> ---------------------------------------------------------------------------
48737> --------------------
48738> | CALIB            |
48739> | STANDHYD ( 40770)|   Area    (ha)=  69.43
48740> |ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
48741> --------------------
48742>                              IMPERVIOUS    PERVIOUS (i)
48743>      Surface Area     (ha)=      56.24         13.19
48744>      Dep. Storage     (mm)=       2.00          5.50
48745>      Average Slope     (%)=       1.70          1.70
48746>      Length            (m)=     680.34         43.00
48747>      Mannings n           =      0.015         0.270
48748>
48749>      Max.Eff.Inten.(mm/hr)=     123.62         89.80
48750>                over (min)        5.00         15.00
48751>      Storage Coeff.  (min)=       6.89 (ii)    11.08 (ii)
48752>      Unit Hyd. Tpeak (min)=       5.00         15.00
48753>      Unit Hyd. peak  (cms)=       0.18          0.09
48754>                                                          *TOTALS*
48755>      PEAK FLOW       (cms)=      17.63          2.16        19.550 (iii)
48756>      TIME TO PEAK    (hrs)=       6.00          6.08         6.00
48757>      RUNOFF VOLUME    (mm)=      91.81         52.03        83.85
48758>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
48759>      RUNOFF COEFFICIENT   =       0.98          0.55         0.89
48760>
48761>
48762>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
48763>              CN*  =  79.5    Ia = Dep. Storage  (Above)
48764>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
48765>            THAN THE STORAGE COEFFICIENT.
48766>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
48767>
48768> ---------------------------------------------------------------------------
48769> --------------------
48770> | RESERVOIR( 70170)|     OVERFLOW IS ON
48771> | IN= 2---> OUT= 1 |
48772> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
48773> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
48774>                            0.0000      0.0000   |    3.6700      4.7800
48775>                            0.2600      1.6200   |    8.6400      6.0000
48776>                            1.4500      2.7100   |    0.0000      0.0000
48777>
48778>                                AREA     QPEAK     TPEAK       R.V.
48779>                                (ha)     (cms)     (hrs)       (mm)
48780>    INFLOW : ID= 2 ( 40770)     69.429     19.550      6.00      83.85
48781>    OUTFLOW: ID= 1 ( 70170)     69.429      2.554      6.58      83.83
48782>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
48783>
48784>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
48785>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
48786>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
48787>
48788>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.07
48789>                    TIME SHIFT OF PEAK FLOW          (min)= 35.00
48790>                    MAXIMUM  STORAGE   USED       (ha.m.)=  3.7400
48791>
48792> ---------------------------------------------------------------------------
48793>
48794>   --------------------------
48795>   | Junction Command(70171) |
48796>   --------------------------
48797>
48798>                             AREA     QPEAK   TPEAK     R.V.
48799>                             (ha)     (cms)    (hrs)     (mm)
48800>   INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
48801>   OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00
48802>
48803>   ---------------------------------------------------------------------------
48804>
48805> --------------------
48806> | ADD HYD  ( 50770)|
48807> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
48808> --------------------         (ha)    (cms)    (hrs)     (mm)
48809>        ID1= 1 ( 60730):   321.47  14.376     6.50    74.17
48810>      + ID2= 2 ( 70170):    69.43   2.554     6.58    83.83
48811>        ====================================================
48812>        ID = 3 ( 50770):   390.90  16.914     6.50    75.89
48813>
48814>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
48815> ---------------------------------------------------------------------------
48816>
48817> --------------------
48818> | ADD HYD  ( 50770)|
48819> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
48820> --------------------         (ha)    (cms)    (hrs)     (mm)
48821> *** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
48822> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
48823>        ID1= 3 ( 50770):   390.90  16.914     6.50    75.89
48824>      + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
48825>        ====================================================
48826>        ID = 1 ( 50770):   390.90  16.914     6.50    75.89
48827>
48828>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
48829> ---------------------------------------------------------------------------
48830> --------------------
48831> | ROUTE CHN( 60770)|
48832> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
48833> --------------------
48834>                <------ DATA FOR SECTION (   1.1) ------>
48835>                Distance      Elevation       Manning
48836>                    0.00         92.38        0.0450
48837>                    3.00         90.34        0.0450
48838>                    6.00         89.94        0.0450
48839>                    9.00         89.83        0.0450
48840>                   12.00         89.80        0.0450
48841>                   15.00         89.72        0.0450
48842>                   18.00         89.58    0.0450 /0.0350  Main Channel
48843>                   21.00         89.15        0.0350      Main Channel
48844>                   24.00         89.82    0.0350 /0.0450  Main Channel
48845>                   27.00         89.76        0.0450
48846>                   30.00         89.78        0.0450
48847>                   33.00         89.79        0.0450
48848>                   36.00         89.80        0.0450
48849>                   39.00         89.72        0.0450
48850>                   42.00         90.35        0.0450
48851>                   45.00         91.36        0.0450
48852>                   48.00         92.10        0.0450
48853>                   51.00         92.21        0.0450
48854>                   54.00         92.34        0.0450
48855>                   56.00         92.35        0.0450
48856>
48857>       <--------------------- TRAVEL TIME TABLE ---------------------->
48858>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
48859>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
48860>         0.15   89.29    .298E+02       0.0         0.31       13.27
48861>         0.29   89.44    .119E+03       0.2         0.50        8.36
48862>         0.44   89.58    .268E+03       0.7         0.65        6.38
48863>         0.61   89.76    .588E+03       1.9         0.79        5.25
48864>         0.78   89.93    .179E+04       5.1         0.71        5.86
48865>         0.96   90.10    .329E+04      11.4         0.87        4.79
48866>         1.13   90.27    .489E+04      20.2         1.03        4.03
48867>         1.30   90.45    .656E+04      31.5         1.19        3.47
48868>         1.47   90.62    .828E+04      45.0         1.35        3.06
48869>         1.65   90.79    .100E+05      60.5         1.50        2.76
48870>         1.82   90.97    .118E+05      77.9         1.64        2.53
48871>         1.99   91.14    .136E+05      97.1         1.77        2.34
48872>         2.17   91.31    .155E+05     118.1         1.90        2.18
48873>         2.34   91.48    .173E+05     140.6         2.02        2.06
48874>         2.51   91.66    .193E+05     164.7         2.13        1.95
48875>         2.68   91.83    .212E+05     190.5         2.23        1.86
48876>         2.86   92.00    .232E+05     218.0         2.33        1.78
48877>         3.03   92.18    .253E+05     242.7         2.39        1.74
48878>         3.20   92.35    .275E+05     262.6         2.37        1.75
48879>
48880>                                    <---- hydrograph ---->   <-pipe / channel->
48881>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
48882>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
48883>    INFLOW : ID= 2 ( 50770)  390.90    16.91    6.50  75.89      1.06      0.96
48884>    OUTFLOW: ID= 1 ( 60770)  390.90    16.86    6.58  75.89      1.06      0.96
48885>
48886>
48887>
48888> ---------------------------------------------------------------------------
48889> --------------------
48890> | CALIB            |
48891> | STANDHYD ( 40780)|   Area    (ha)=  24.57
48892> |ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
48893> --------------------
48894>                              IMPERVIOUS    PERVIOUS (i)
48895>      Surface Area     (ha)=      12.78         11.79
48896>      Dep. Storage     (mm)=       2.00          8.70
48897>      Average Slope     (%)=       1.50          1.50
48898>      Length            (m)=     404.74         43.00
48899>      Mannings n           =      0.015         0.330
48900>
48901>      Max.Eff.Inten.(mm/hr)=     123.62         79.23
48902>                over (min)        5.00         20.00
48903>      Storage Coeff.  (min)=       5.24 (ii)    15.66 (ii)
48904>      Unit Hyd. Tpeak (min)=       5.00         20.00
48905>      Unit Hyd. peak  (cms)=       0.21          0.07
48906>                                                          *TOTALS*
48907>      PEAK FLOW       (cms)=       4.06          1.48         5.102 (iii)
48908>      TIME TO PEAK    (hrs)=       6.00          6.17         6.00
48909>      RUNOFF VOLUME    (mm)=      91.81         48.09        69.95
48910>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
48911>      RUNOFF COEFFICIENT   =       0.98          0.51         0.75
48912>
48913>
48914>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
48915>              CN*  =  78.6    Ia = Dep. Storage  (Above)
48916>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
48917>            THAN THE STORAGE COEFFICIENT.
48918>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
48919>
48920> ---------------------------------------------------------------------------
48921>
48922> --------------------
48923> | ADD HYD  ( 50780)|
48924> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
48925> --------------------         (ha)    (cms)    (hrs)     (mm)
48926>        ID1= 1 ( 40780):    24.57   5.102     6.00    69.95
48927>      + ID2= 2 ( 60770):   390.90  16.863     6.58    75.89
48928>        ====================================================
48929>        ID = 3 ( 50780):   415.47  18.198     6.50    75.54
48930>
48931>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
48932> ---------------------------------------------------------------------------
48933> --------------------
48934> | CALIB            |
48935> | STANDHYD ( 40790)|   Area    (ha)=   8.18
48936> |ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
48937> --------------------
48938>                              IMPERVIOUS    PERVIOUS (i)
48939>      Surface Area     (ha)=       5.38          2.81
48940>      Dep. Storage     (mm)=       2.00          5.74
48941>      Average Slope     (%)=       1.20          1.20
48942>      Length            (m)=     233.56         52.00
48943>      Mannings n           =      0.015         0.270
48944>
48945>      Max.Eff.Inten.(mm/hr)=     123.62         88.80
48946>                over (min)        5.00         15.00
48947>      Storage Coeff.  (min)=       4.03 (ii)    14.60 (ii)
48948>      Unit Hyd. Tpeak (min)=       5.00         15.00
48949>      Unit Hyd. peak  (cms)=       0.24          0.08
48950>                                                          *TOTALS*
48951>      PEAK FLOW       (cms)=       1.74          0.43         2.111 (iii)
48952>      TIME TO PEAK    (hrs)=       6.00          6.08         6.00
48953>      RUNOFF VOLUME    (mm)=      91.81         52.55        77.20
48954>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
48955>      RUNOFF COEFFICIENT   =       0.98          0.56         0.82
48956>
48957> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
48958>
48959>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
48960>              CN*  =  79.4    Ia = Dep. Storage  (Above)
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       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66          0.49
     Dep. Storage     (mm)=       2.00          7.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     185.29         48.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     123.62         82.26
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       3.35 (ii)     7.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.26          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.58          0.09          1.674 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81         48.27          87.54
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.51           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40790):     8.18   2.111     6.00    77.20
     + ID2= 2 ( 40800):     5.15   1.674     6.00    87.54
       ================================================
       ID = 3 ( 50795):    13.33   3.785     6.00    81.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7780      0.6570
                          0.0040      0.0150   |    1.1550      0.7720
                          0.0090      0.0810   |    1.5780      0.8930
                          0.0120      0.1550   |    1.9240      0.9870
                          0.0140      0.2370   |    2.4190      1.1190
                          0.0160      0.3260   |    2.9510      1.2560
                          0.0620      0.3720   |    3.5980      1.3270
                          0.2560      0.4700   |    4.5570      1.3990
                          0.5310      0.5740   |    5.7230      1.4730

                              AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332     3.785      6.00      81.20
   OUTFLOW: ID= 1 ( 70180)     13.332     0.747      6.33      81.12
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.74
                  TIME SHIFT OF PEAK FLOW         (min)= 20.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6468

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  --------------------------
  | Junction Command(70181) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41          2.16
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     154.27         40.00
     Mannings n           =      0.013         0.250

     Max.Eff.Inten.(mm/hr)=     123.62        107.84
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       3.04 (ii)     9.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.27          0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.42          0.48          0.906 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      92.81         63.76          73.84
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.99          0.68           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40805):     3.57   0.906     6.00    73.84
     + ID2= 2 ( 70180):    13.33   0.747     6.33    81.12
       ================================================
       ID = 3 ( 50790):    16.90   1.371     6.00    79.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50790):    16.90   1.371     6.00    79.59
     + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
       ================================================
       ID = 1 ( 50790):    16.90   1.371     6.00    79.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50780):   415.47  18.198     6.50    75.54
     + ID2= 2 ( 50790):    16.90   1.371     6.00    79.59
       ================================================
       ID = 3 ( 50800):   432.38  19.120     6.50    75.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         88.54         0.0450
                   3.00         88.18         0.0450
                   6.00         87.54         0.0450
                   9.00         87.44         0.0450
                  12.00         87.13         0.0450
                  15.00         87.23         0.0450
                  18.00         87.18         0.0450
                  21.00         86.49    0.0450 /0.0350  Main Channel
                  24.00         85.82         0.0350      Main Channel
                  27.00         86.44    0.0350 /0.0450  Main Channel
                  30.00         87.18         0.0450
                  33.00         87.16         0.0450
                  36.00         87.25         0.0450
                  39.00         87.46         0.0450
                  42.00         87.70         0.0450
                  45.00         87.80         0.0450
                  48.00         88.00         0.0450
                  49.00         88.12         0.0450
                  50.00         88.23         0.0450
                  52.00         88.59         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.12    85.95    .779E+02       0.0          0.37      48.75
      0.25    86.07    .312E+03       0.2          0.59      30.71
      0.37    86.19    .701E+03       0.5          0.77      23.44
      0.49    86.32    .125E+04       1.1          0.94      19.35
      0.62    86.44    .195E+04       1.9          1.09      16.67
      0.77    86.59    .299E+04       3.8          1.36      13.29
      0.92    86.74    .424E+04       6.2          1.59      11.42
      1.07    86.89    .570E+04       9.3          1.77      10.25
      1.22    87.04    .736E+04      13.0          1.92       9.44
      1.37    87.19    .938E+04      16.8          1.94       9.33
      1.52    87.34    .134E+05      22.9          1.86       9.74
      1.66    87.49    .182E+05      31.1          1.86       9.72
      1.81    87.64    .237E+05      41.6          1.91       9.51
      1.96    87.79    .298E+05      53.9          1.96       9.22
      2.11    87.94    .365E+05      68.9          2.05       8.84
      2.26    88.09    .437E+05      86.5          2.15       8.43
      2.41    88.24    .513E+05     106.2          2.25       8.04
      2.56    88.39    .592E+05     128.2          2.36       7.69
      2.71    88.54    .674E+05     152.5          2.46       7.36

                                   <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  432.38    19.12    6.50  75.70      1.42      1.91
   OUTFLOW: ID= 1 ( 60800)  432.38    18.39    6.67  75.70      1.40      1.92


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40820)|   Area    (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         11.23
     Dep. Storage     (mm)=       2.00          9.57
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     307.74         44.00
     Mannings n           =      0.015         0.390

     Max.Eff.Inten.(mm/hr)=     123.62         75.22
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       3.91 (ii)    14.40 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.25          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.62          1.44          1.859 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81         43.43          49.71
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.46           0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  73.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40820):    14.21   1.859     6.00    49.71
     + ID2= 2 ( 60800):   432.38  18.387     6.67    75.70
       ================================================
       ID = 3 ( 50820):   446.58  18.899     6.67    74.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50500):  1213.24  68.115     6.83    69.30
     + ID2= 2 ( 50820):   446.58  18.899     6.67    74.87
       ================================================
       ID = 3 ( 50830):  1659.82  86.621     6.83    70.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.12         0.0450
                 20.00         81.53         0.0450
                 24.00         81.26         0.0450
                 28.00         81.27         0.0450
                 32.00         80.34    0.0450 /0.0350  Main Channel
                 36.00         79.95         0.0350      Main Channel
                 40.00         80.78         0.0450
                 44.00         81.45         0.0450
                 48.00         81.53         0.0450
                 52.00         81.49         0.0450
                 56.00         81.51         0.0450
                 60.00         81.58         0.0450
                 64.00         81.58         0.0450
                 68.00         81.61         0.0450
                 72.00         81.75         0.0450
                 80.00         82.07         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
```

```
        0.10    80.05    .555E+01       0.0          0.24       5.45
        0.19    80.14    .222E+02       0.1          0.38       3.43
        0.29    80.24    .499E+02       0.3          0.50       2.62
        0.39    80.34    .888E+02       0.7          0.60       2.16
        0.50    80.45    .146E+03       1.4          0.77       1.68
        0.62    80.57    .213E+03       2.5          0.91       1.43
        0.73    80.68    .290E+03       3.8          1.02       1.27
        0.85    80.80    .375E+03       5.4          1.13       1.15
        0.96    80.91    .471E+03       7.6          1.26       1.03
        1.08    81.03    .578E+03      10.1          1.37       0.95
        1.19    81.14    .695E+03      13.0          1.46       0.89
        1.31    81.26    .823E+03      16.2          1.53       0.85
        1.43    81.37    .100E+04      19.7          1.53       0.85
        1.54    81.49    .121E+04      24.1          1.56       0.84
        1.66    81.60    .155E+04      29.0          1.46       0.89
        1.77    81.72    .204E+04      36.4          1.39       0.93
        1.89    81.84    .259E+04      45.6          1.38       0.95
        2.00    81.95    .320E+04      56.7          1.38       0.94
        2.12    82.07    .387E+04      69.6          1.40       0.93

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1659.82    86.62    6.83  70.80      2.11      1.40
   OUTFLOW: ID= 1 ( 60830) 1659.82    86.65    6.83  70.80      2.11      1.40
```

```
| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36        15.15
     Dep. Storage     (mm)=       2.00         5.54
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     550.83        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     123.62       130.51
                   over (min)      5.00        15.00
     Storage Coeff.  (min)=       6.58 (ii)   14.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.18         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       7.79         3.33      10.718 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08       6.00
     RUNOFF VOLUME    (mm)=      91.81        57.83      75.99
     TOTAL RAINFALL   (mm)=      93.81        93.81      93.81
     RUNOFF COEFFICIENT   =       0.98         0.62       0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         1.59
     Dep. Storage     (mm)=       2.00         9.61
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     116.69        69.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=     123.62        77.83
                   over (min)      5.00        15.00
     Storage Coeff.  (min)=       1.98 (ii)   13.87 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.22       0.286 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08       6.00
     RUNOFF VOLUME    (mm)=      91.81        44.85      51.63
     TOTAL RAINFALL   (mm)=      93.81        93.81      93.81
     RUNOFF COEFFICIENT   =       0.98         0.48       0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  75.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51  10.718     6.00    75.99
      + ID2= 2 ( 40840):     2.04   0.286     6.00    51.63
        ================================================
        ID = 3 ( 50840):    47.56  11.004     6.00    74.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56  11.004     6.00    74.94
      + ID2= 2 ( 60830):  1659.82  86.653     6.83    70.80
        ================================================
        ID = 1 ( 50840):  1707.38  87.920     6.83    70.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.18        0.0450
                 32.00         79.04        0.0450
                 40.00         78.76        0.0450
                 48.00         78.58        0.0450
                 56.00         78.21        0.0450
                 64.00         76.89        0.0350      Main Channel
                 72.00         78.08        0.0450
                 80.00         79.44        0.0450
                 88.00         80.28        0.0450
                 96.00         80.92        0.0450
                104.00         81.29        0.0450
                112.00         81.62        0.0450
                120.00         81.76        0.0450
                128.00         81.81        0.0450
                140.00         82.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.27    77.16    .320E+03       0.2          0.48      24.00
       0.54    77.43    .128E+04       1.4          0.75      15.12
       0.81    77.70    .288E+04       4.2          0.99      11.54
       1.08    77.97    .512E+04       9.0          1.20       9.53
       1.35    78.24    .799E+04      16.6          1.42       8.02
       1.62    78.51    .119E+05      26.9          1.54       7.40
       1.89    78.78    .176E+05      41.0          1.59       7.15
       2.16    79.05    .252E+05      62.9          1.71       6.68
       2.43    79.32    .341E+05      93.9          1.89       6.05
       2.70    79.59    .438E+05     131.1          2.05       5.56
       2.97    79.86    .544E+05     175.1          2.20       5.18
       3.24    80.13    .660E+05     226.4          2.35       4.86
       3.51    80.40    .787E+05     284.9          2.48       4.60
       3.77    80.67    .924E+05     351.1          2.60       4.39
       4.04    80.94    .107E+06     425.7          2.72       4.20
       4.31    81.21    .124E+06     507.1          2.81       4.06
       4.58    81.48    .141E+06     598.4          2.90       3.94
       4.85    81.75    .161E+06     695.9          2.96       3.86
       5.12    82.02    .185E+06     800.9          2.97       3.85

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 1707.38    87.92    6.83  70.92      2.37      1.85
   OUTFLOW: ID= 1 ( 60840) 1707.38    87.46    6.83  70.92      2.36      1.84
```

```
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14        18.19
     Dep. Storage     (mm)=       2.00         7.29
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     418.93       142.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=     123.62        68.88
                   over (min)      5.00        25.00
     Storage Coeff.  (min)=       4.91 (ii)   24.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.22         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.16         1.88       3.268 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25       6.00
     RUNOFF VOLUME    (mm)=      91.81        49.12      59.63
     TOTAL RAINFALL   (mm)=      93.81        93.81      93.81
     RUNOFF COEFFICIENT   =       0.98         0.52       0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33   3.268     6.00    59.63
      + ID2= 2 ( 60840):  1707.38  87.462     6.83    70.92
        ================================================
        ID = 3 ( 50850):  1733.70  88.532     6.83    70.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77        35.37
     Dep. Storage     (mm)=       2.00         8.79
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     611.77       120.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=     123.62        58.42
                   over (min)      5.00        30.00
     Storage Coeff.  (min)=       7.01 (ii)   29.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.17         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       6.04         3.18       7.638 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33       6.00
     RUNOFF VOLUME    (mm)=      91.81        49.82      64.10
     TOTAL RAINFALL   (mm)=      93.81        93.81      93.81
     RUNOFF COEFFICIENT   =       0.98         0.53       0.68

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         85.55        0.0450
                 24.00         85.23        0.0450
                 28.00         85.17        0.0450
                 32.00         85.07        0.0450
                 36.00         84.96        0.0350      Main Channel
                 40.00         84.96        0.0350      Main Channel
                 44.00         85.00    0.0350 /0.0450  Main Channel
                 48.00         85.03        0.0450
                 52.00         85.18        0.0450
                 56.00         85.22        0.0450
                 60.00         85.31        0.0450
                 64.00         85.33        0.0450
                 68.00         85.38        0.0450
                 80.00         85.59        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.01    84.96    .992E+01       0.0          0.05     238.32
       0.04    84.99    .159E+03       0.0          0.21      57.53
       0.07    85.03    .408E+03       0.2          0.32      38.32
       0.10    85.06    .751E+03       0.4          0.40      30.54
       0.13    85.09    .114E+04       0.7          0.47      25.77
       0.16    85.12    .158E+04       1.2          0.53      22.66
       0.19    85.15    .206E+04       1.7          0.59      20.45
       0.22    85.18    .259E+04       2.3          0.64      18.91
       0.25    85.21    .321E+04       3.0          0.67      18.12
       0.29    85.24    .393E+04       3.8          0.70      17.32
       0.32    85.27    .473E+04       4.8          0.73      16.56
       0.35    85.30    .562E+04       5.9          0.76      15.89
       0.38    85.34    .663E+04       7.0          0.77      15.69
       0.41    85.37    .777E+04       8.5          0.80      15.20
       0.44    85.40    .902E+04      10.2          0.82      14.69
       0.47    85.43    .104E+05      12.2          0.85      14.19
       0.50    85.46    .118E+05      14.3          0.88      13.73
       0.53    85.49    .133E+05      16.7          0.91      13.31
       0.56    85.52    .150E+05      19.3          0.94      12.91

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40880)   56.14     7.64    6.00  64.10      0.39      0.78
   OUTFLOW: ID= 1 ( 60880)   56.14     5.06    6.08  64.07      0.32      0.74
```

```
| ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
| DT=  5.0 min     |     Length        (m)= 888.03
--------------------     Slope       (m/m)=  0.004
                         Manning n         =  0.013

      <------------------ TRAVEL TIME TABLE --------------------->
        DEPTH      VOLUME     FLOW RATE     VELOCITY     TRAV.TIME
          (m)      (cu.m.)       (cms)         (m/s)         min
         0.10     .213E+03        0.2          0.93         15.91
         0.20     .426E+03        0.7          1.41         10.53
         0.30     .639E+03        1.3          1.76          8.42
         0.40     .853E+03        2.0          2.04          7.25
         0.50     .107E+04        2.7          2.27          6.51
         0.60     .128E+04        3.6          2.47          5.99
         0.70     .149E+04        4.4          2.64          5.60
         0.80     .171E+04        5.4          2.79          5.30
         0.90     .192E+04        6.3          2.92          5.06
         1.00     .213E+04        7.3          3.04          4.87
         1.10     .234E+04        8.3          3.15          4.71
         1.20     .256E+04        9.3          3.24          4.57
         1.30     .277E+04       10.4          3.33          4.45
         1.40     .298E+04       11.4          3.40          4.35
         1.50     .320E+04       12.5          3.48          4.26
         1.60     .341E+04       13.6          3.54          4.18
         1.70     .362E+04       14.7          3.60          4.11
         1.80     .384E+04       15.8          3.66          4.05
         1.90     .405E+04       16.9          3.71          3.99
                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60880)   56.14     5.06    6.08  64.07      0.77      2.74
   OUTFLOW: ID= 1 ( 80880)   56.14     4.90    6.25  64.07      0.75      2.71


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       18.24         23.47
     Dep. Storage     (mm)=        2.00          8.20
     Average Slope     (%)=        1.10          1.10
     Length            (m)=      527.32         85.00
     Mannings n           =       0.015         0.350

     Max.Eff.Inten.(mm/hr)=      123.62         74.47
                   over (min)        5.00         30.00
     Storage Coeff.  (min)=        6.74 (ii)    25.01 (ii)
     Unit Hyd. Tpeak (min)=        5.00         30.00
     Unit Hyd. peak  (cms)=        0.18          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        4.37          2.53          5.661 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.33           6.00
     RUNOFF VOLUME    (mm)=       91.81         48.55          62.76
     TOTAL RAINFALL   (mm)=       93.81         93.81          93.81
     RUNOFF COEFFICIENT   =        0.98          0.52           0.67


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  75.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40900)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        8.41          5.15
     Dep. Storage     (mm)=        1.00          7.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=      300.67         43.00
     Mannings n           =       0.015         0.310

     Max.Eff.Inten.(mm/hr)=      123.62        125.00
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=        4.95 (ii)    12.62 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.22          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        2.16          1.13          3.164 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=       92.81         55.98          73.66
     TOTAL RAINFALL   (mm)=       93.81         93.81          93.81
     RUNOFF COEFFICIENT   =        0.99          0.60           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------      (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  13.56      3.16      6.00   73.66
     ==================================================
     MAJOR SYS.(ID= 2):   2.96      2.20      6.00   73.66
     MINOR SYS.(ID= 3):  10.60      0.96      5.75   73.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40890):    41.71   5.661     6.00    62.76
     + ID2= 2 ( 50850):  1733.70  88.532     6.83    70.74
       ==================================================
       ID = 3 ( 50890):  1775.41  90.242     6.83    70.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50890):  1775.41  90.242     6.83    70.56
     + ID2= 2 ( 80880):    56.14   4.904     6.25    64.07
       ==================================================
       ID = 1 ( 50890):  1831.55  93.669     6.83    70.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50890):  1831.55  93.669     6.83    70.36
     + ID2= 2 ( 90020):    10.60   0.960     5.75    73.66
       ==================================================
       ID = 3 ( 50890):  1842.16  94.011     6.83    70.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00          79.05        0.0450
                    2.00          78.40        0.0450
                    4.00          77.75        0.0450
                    6.00          77.16        0.0450
                    8.00          76.78        0.0450
                   10.00          76.65        0.0450
                   12.00          76.60        0.0450
                   14.00          76.58        0.0450
                   16.00          76.08        0.0450
                   18.00          75.49    0.0450 /0.0350  Main Channel
                   20.00          75.46        0.0350      Main Channel
                   22.00          75.52    0.0350 /0.0450  Main Channel
                   24.00          76.15        0.0450
                   26.00          76.44        0.0450
                   28.00          76.56        0.0450
                   30.00          76.68        0.0450
                   32.00          76.86        0.0450
                   34.00          77.01        0.0450
                   36.00          77.10        0.0450
                   40.00          79.16        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
         (m)      (m)      (cu.m.)       (cms)         (m/s)       (min)
        0.03    75.49    .127E+02         0.0          0.14       32.03
        0.22    75.68    .231E+03         0.6          0.69        6.29
        0.40    75.87    .510E+03         2.0          1.01        4.28
        0.59    76.05    .849E+03         4.1          1.25        3.45
        0.78    76.24    .125E+04         6.9          1.43        3.02
        0.97    76.43    .175E+04        10.6          1.57        2.75
        1.15    76.62    .240E+04        14.6          1.57        2.75
        1.34    76.80    .343E+04        21.1          1.60        2.71
        1.53    76.99    .465E+04        30.1          1.68        2.58
        1.71    77.18    .605E+04        41.3          1.77        2.44
        1.90    77.36    .754E+04        55.7          1.92        2.26
        2.09    77.55    .908E+04        72.1          2.06        2.10
        2.27    77.74    .107E+05        90.6          2.20        1.96
        2.46    77.92    .123E+05       111.1          2.34        1.84
        2.65    78.11    .140E+05       133.5          2.48        1.74
        2.84    78.30    .157E+05       157.9          2.61        1.66
        3.02    78.49    .175E+05       184.1          2.73        1.58
        3.21    78.67    .193E+05       212.1          2.85        1.52
        3.40    78.86    .211E+05       242.1          2.97        1.46

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1842.16    94.01    6.83  70.38      2.31      2.23
   OUTFLOW: ID= 1 ( 60900) 1842.16    93.98    6.83  70.38      2.30      2.23


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--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        4.77          2.15
     Dep. Storage     (mm)=        2.00          7.07
     Average Slope     (%)=        1.70          1.70
     Length            (m)=      214.73         44.00
     Mannings n           =       0.015         0.280

     Max.Eff.Inten.(mm/hr)=      123.62        145.89
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=        3.45 (ii)    10.67 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.26          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.25          0.59          1.777 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=       91.81         59.38          76.54
     TOTAL RAINFALL   (mm)=       93.81         93.81          93.81
     RUNOFF COEFFICIENT   =        0.98          0.63           0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40910):     6.92    1.777     6.00    76.54
     + ID2= 2 ( 60900):  1842.16   93.984     6.83    70.38
       ==================================================
       ID = 3 ( 50910):  1849.07   94.148     6.83    70.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.040 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.135
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.630

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.36

     Unit Hyd Qpeak  (cms)=   1.897

     PEAK FLOW       (cms)=   2.154 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  59.470
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.079 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.342
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 1 (******):    17.88   2.154     6.25    59.47
       + ID2= 2 (******):     0.44   0.079     6.08    59.34
         ================================================
         ID = 3 (******):    18.32   2.214     6.17    59.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   0.33   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 -------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.070

      PEAK FLOW       (cms)=   0.061 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  59.310
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.632

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   7.90   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 -------------------   U.H. Tp(hrs)=   0.25

      Unit Hyd Qpeak  (cms)=   1.207

      PEAK FLOW       (cms)=   1.226 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.433
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 1 (******):     0.33   0.061     6.00    59.31
       + ID2= 2 (******):     7.90   1.226     6.08    59.43
         ================================================
         ID = 3 (******):     8.23   1.286     6.08    59.43

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 1 (******):     0.19   0.040     6.00    59.14
       + ID2= 2 (******):    18.32   2.214     6.17    59.47
         ================================================
         ID = 3 (******):    18.51   2.240     6.17    59.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 3 (******):    18.51   2.240     6.17    59.46
       + ID2= 2 (******):     8.23   1.286     6.08    59.43
         ================================================
         ID = 1 (******):    26.74   3.467     6.17    59.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | CALIB            |
 | STANDHYD (******)|   Area     (ha)=   5.85
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
 -------------------

                             IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.79         0.06
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       1.70         1.00
      Length            (m)=      78.30         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=     123.62        96.12
                    over (min)       5.00         5.00
      Storage Coeff.  (min)=       1.73 (ii)    1.73 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.32         0.32
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.99         0.02        2.005 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00         6.00
      RUNOFF VOLUME    (mm)=      91.81        59.48        91.48
      TOTAL RAINFALL   (mm)=      93.81        93.81        93.81
      RUNOFF COEFFICIENT   =       0.98         0.63         0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 1 (******):     5.85   2.005     6.00    91.48
       + ID2= 2 (******):     0.82   0.255     6.50    68.90
         ================================================
         ID = 3 (******):     6.67   2.005     6.00    88.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 1 (******):     0.38   0.461     6.00    85.25
       + ID2= 2 (******):     6.20   1.265     6.50    68.90
         ================================================
         ID = 3 (******):     6.58   1.265     6.50    69.84

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 3 (******):     6.58   1.265     6.50    69.84
       + ID2= 2 (******):     6.67   2.005     6.00    88.70
         ================================================
         ID = 1 (******):    13.26   2.519     6.00    79.33

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 -------------------

 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 -------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         426.51        0.0450
                    0.98         426.14        0.0350      Main Channel
                    2.04         426.14        0.0350      Main Channel
                   20.51         426.51        0.0350      Main Channel

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)       (cms)        (m/s)       (min)
         0.00   426.14    .579E+00         0.0         0.03      191.52
         0.02   426.16    .114E+02         0.0         0.14       39.52
         0.04   426.18    .285E+02         0.0         0.19       27.56
         0.06   426.20    .520E+02         0.0         0.24       22.17
         0.08   426.22    .818E+02         0.1         0.28       18.92
         0.10   426.24    .118E+03         0.1         0.32       16.68
         0.12   426.26    .161E+03         0.2         0.36       15.02
         0.14   426.27    .210E+03         0.3         0.39       13.73
         0.16   426.29    .265E+03         0.3         0.42       12.69
         0.18   426.31    .326E+03         0.5         0.45       11.82
         0.20   426.33    .394E+03         0.6         0.48       11.10
         0.22   426.35    .469E+03         0.7         0.51       10.47
         0.24   426.37    .549E+03         0.9         0.54        9.93
         0.26   426.39    .637E+03         1.1         0.56        9.46
         0.28   426.41    .730E+03         1.3         0.59        9.03
         0.30   426.43    .830E+03         1.6         0.62        8.65
         0.32   426.45    .936E+03         1.9         0.64        8.31
         0.34   426.47    .105E+04         2.2         0.67        8.01
         0.35   426.49    .117E+04         2.5         0.69        7.72

      **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)     13.26     2.52     6.00  79.33      0.35      0.68
    OUTFLOW: ID= 1 (******)     13.26     2.05     6.00  79.33      0.31      0.63


 -------------------
 | ROUTEPIPE(******)|     PIPE Number     =   1.00
 | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)= 900.00
 | DT=  5.0 min     |     Length        (m)= 372.00
 -------------------      Slope       (m/m)=  0.004
                          Manning n       =  0.013

      <----------------- TRAVEL TIME TABLE ------------------->
        DEPTH      VOLUME     FLOW RATE     VELOCITY     TRAV.TIME
          (m)     (cu.m.)        (cms)         (m/s)          min
         0.05    .423E+02         0.1          0.58        10.67
         0.09    .846E+02         0.2          0.90         6.89
         0.14    .127E+03         0.4          1.15         5.39
         0.19    .169E+03         0.6          1.36         4.55
         0.24    .211E+03         0.9          1.55         4.01
         0.28    .254E+03         1.2          1.71         3.63
         0.33    .296E+03         1.5          1.85         3.34
         0.38    .338E+03         1.8          1.99         3.12
         0.43    .381E+03         2.2          2.11         2.94
         0.47    .423E+03         2.5          2.22         2.80
         0.52    .465E+03         2.9          2.32         2.67
         0.57    .507E+03         3.3          2.41         2.57
         0.62    .550E+03         3.7          2.50         2.48
         0.66    .592E+03         4.1          2.58         2.40
         0.71    .634E+03         4.5          2.66         2.33
         0.76    .677E+03         5.0          2.73         2.27
         0.81    .719E+03         5.4          2.80         2.21
         0.85    .761E+03         5.9          2.86         2.17
         0.90    .804E+03         6.3          2.92         2.12
                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)      3.73     0.85     6.00  85.25      0.23      1.52
    OUTFLOW: ID= 1 (******)      3.73     0.86     6.00  85.24      0.23      1.53


      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.


 -------------------
 | ADD HYD  (******)|
 |   3 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 1 (******):     3.73   0.857     6.00    85.24
       + ID2= 2 (******):    26.74   3.467     6.17    59.45
         ================================================
         ID = 3 (******):    30.47   4.044     6.08    62.61

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 -------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 ------------------- ---------(ha)----(cms)----(hrs)-----(mm)
         ID1= 3 (******):    30.47   4.044     6.08    62.61
       + ID2= 2 (******):    13.26   2.052     6.00    79.33
         ================================================
         ID = 1 (******):    43.72   5.774     6.08    67.68

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

 -------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 -------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         418.26        0.0450
                   40.58         417.27        0.0450
                   68.64         416.80        0.0450
                  140.74         415.56        0.0450
                  163.74         415.03    0.0450 /0.0350  Main Channel
                  211.93         413.30        0.0350      Main Channel
                  250.43         411.92        0.0350      Main Channel
                  258.86         411.77        0.0350      Main Channel
                  276.07         411.80        0.0350      Main Channel
                  290.03         411.70        0.0350      Main Channel
                  294.99         411.74        0.0350      Main Channel
                  298.74         411.97        0.0350      Main Channel
                  309.80         412.64        0.0350      Main Channel
                  321.40         413.39        0.0350      Main Channel
                  332.67         415.03    0.0350 /0.0450  Main Channel
                  344.47         416.63        0.0450
                  360.44         418.31        0.0450
                  381.73         419.43        0.0450
                  385.80         419.95        0.0450
                  389.30         420.75        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)       (cms)        (m/s)       (min)
         0.33   412.03    .115E+05        14.5         1.18       13.21
         0.67   412.36    .302E+05        61.5         1.91        8.18
         1.00   412.70    .535E+05       139.9         2.46        6.38
         1.33   413.03    .814E+05       252.5         2.91        5.37
         1.66   413.36    .114E+06       402.0         3.32        4.72
         2.00   413.70    .150E+06       597.3         3.74        4.19
         2.33   414.03    .190E+06       834.3         4.12        3.80
         2.66   414.36    .234E+06      1114.3         4.47        3.50
         2.99   414.69    .281E+06      1439.4         4.80        3.26
         3.33   415.03    .332E+06      1811.8         5.12        3.06
         3.69   415.39    .393E+06      2361.5         5.65        2.77
         4.05   415.75    .459E+06      2978.2         6.10        2.57
         4.41   416.10    .533E+06      3668.2         6.46        2.42
         4.76   416.46    .615E+06      4437.5         6.78        2.31
         5.12   416.82    .705E+06      5290.7         7.05        2.22
         5.48   417.18    .804E+06      6232.2         7.29        2.15
         5.84   417.54    .910E+06      7276.0         7.51        2.08
```

```
50185>        6.20   417.90    .102E+07    8417.1          7.74       2.02
50186>        6.56   418.26    .114E+07    9654.5          7.95       1.97
50187>
50188>                                    <---- hydrograph ---->   <-pipe / channel->
50189>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
50190>                                (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
50191>    INFLOW : ID= 2 (******)   43.72     5.77    6.08  67.68      0.13      1.18
50192>    OUTFLOW: ID= 1 (******)   43.72     4.65    6.33  67.68      0.11      1.18
50193>
50194>
50195>
50196> --------------------------------------------------------------------------------
50197> --------------------
50198> | CALIB            |
50199> | NASHYD   (******)|   Area     (ha)=  31.02   Curve Number   (CN)= 85.0
50200> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
50201> --------------------   U.H. Tp(hrs)=   0.55
50202>
50203>      Unit Hyd Qpeak  (cms)=   2.154
50204>
50205>      PEAK FLOW       (cms)=   2.783 (i)
50206>      TIME TO PEAK    (hrs)=   6.417
50207>      RUNOFF VOLUME    (mm)=  59.479
50208>      TOTAL RAINFALL   (mm)=  93.808
50209>      RUNOFF COEFFICIENT   =   0.634
50210>
50211>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
50212>
50213> --------------------------------------------------------------------------------
50214>
50215> --------------------
50216> | ADD HYD  (******)|
50217> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
50218> --------------------         (ha)    (cms)    (hrs)      (mm)
50219>         ID1= 1 (******):    31.02   2.783     6.42    59.48
50220>       + ID2= 2 (******):    43.72   4.650     6.33    67.68
50221>         ================================================
50222>         ID = 3 (******):    74.74   7.387     6.42    64.28
50223>
50224>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
50225> --------------------------------------------------------------------------------
50226>
50227>  FINISH
50228> ================================================================================
50229>
50230>
```

```
 ================================================================================
        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
        V    V   I    SS     U   U   A A   L
         V  V    I     SS    U   U  AAAAA  L
          V V    I      SS   U   U  A   A  L
           VV    I    SSSSS  UUUUU  A   A  LLLLL

         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
        O   O    T      T    H   H   Y Y   MM MM  O   O
        O   O    T      T    H   H    Y    M M M  O   O
         OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9


 DATE: 02/19/2026                          TIME: 02:53:48

 USER:



 COMMENTS: _____________________________________________________

 --------------------------------------------------------------------------------
   ************************************************
   ** SIMULATION : 100yr 12hr 5min SCS Type II_C **
   ************************************************


 --------------------
 |    READ STORM    |    Filename: C:\Users\DPham\AppD
 |                  |              ata\Local\Temp\
 |                  |              2cdb82b8-3e8a-4243-a179-35d140aed5e5\e594bfaa
 | Ptotal=102.36 mm |    Comments: 100yr 12hr 5min SCS Type II_CC
 --------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    0.00 |  3.08    4.09 |  6.17   18.42 |  9.25    3.58
                 0.08    2.56 |  3.17    4.09 |  6.25   18.42 |  9.33    3.58
                 0.17    2.56 |  3.25    4.09 |  6.33   18.42 |  9.42    3.58
                 0.25    2.56 |  3.33    4.09 |  6.42   18.42 |  9.50    3.58
                 0.33    2.56 |  3.42    4.09 |  6.50   18.42 |  9.58    3.58
                 0.42    2.56 |  3.50    4.09 |  6.58    8.19 |  9.67    3.58
                 0.50    2.56 |  3.58    4.09 |  6.67    8.19 |  9.75    3.58
                 0.58    2.56 |  3.67    4.09 |  6.75    8.19 |  9.83    3.58
                 0.67    2.56 |  3.75    4.09 |  6.83    8.19 |  9.92    3.58
                 0.75    2.56 |  3.83    4.09 |  6.92    8.19 | 10.00    3.58
                 0.83    2.56 |  3.92    4.09 |  7.00    8.19 | 10.08    2.05
                 0.92    2.56 |  4.00    4.09 |  7.08    6.14 | 10.17    2.05
                 1.00    2.56 |  4.08    6.14 |  7.17    6.14 | 10.25    2.05
                 1.08    2.56 |  4.17    6.14 |  7.25    6.14 | 10.33    2.05
                 1.17    2.56 |  4.25    6.14 |  7.33    6.14 | 10.42    2.05
                 1.25    2.56 |  4.33    6.14 |  7.42    6.14 | 10.50    2.05
                 1.33    2.56 |  4.42    6.14 |  7.50    6.14 | 10.58    2.05
                 1.42    2.56 |  4.50    6.14 |  7.58    6.14 | 10.67    2.05
                 1.50    2.56 |  4.58    8.19 |  7.67    6.14 | 10.75    2.05
                 1.58    2.56 |  4.67    8.19 |  7.75    6.14 | 10.83    2.05
                 1.67    2.56 |  4.75    8.19 |  7.83    6.14 | 10.92    2.05
                 1.75    2.56 |  4.83    8.19 |  7.92    6.14 | 11.00    2.05
                 1.83    2.56 |  4.92    8.19 |  8.00    6.14 | 11.08    2.05
                 1.92    2.56 |  5.00    8.19 |  8.08    3.58 | 11.17    2.05
                 2.00    2.56 |  5.08   12.28 |  8.17    3.58 | 11.25    2.05
                 2.08    3.07 |  5.17   12.28 |  8.25    3.58 | 11.33    2.05
                 2.17    3.07 |  5.25   12.28 |  8.33    3.58 | 11.42    2.05
                 2.25    3.07 |  5.33   12.28 |  8.42    3.58 | 11.50    2.05
                 2.33    3.07 |  5.42   12.28 |  8.50    3.58 | 11.58    2.05
                 2.42    3.07 |  5.50   12.28 |  8.58    3.58 | 11.67    2.05
                 2.50    3.07 |  5.58   49.13 |  8.67    3.58 | 11.75    2.05
                 2.58    3.07 |  5.67   49.13 |  8.75    3.58 | 11.83    2.05
                 2.67    3.07 |  5.75   49.13 |  8.83    3.58 | 11.92    2.05
                 2.75    3.07 |  5.83  135.12 |  8.92    3.58 | 12.00    2.05
                 2.83    3.07 |  5.92  135.12 |  9.00    3.58 |
                 2.92    3.07 |  6.00  135.12 |  9.08    3.58 |
                 3.00    3.07 |  6.08   18.42 |  9.17    3.58 |

 --------------------------------------------------------------------------------

 --------------------
 | CALIB            |
 | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.47

      Unit Hyd Qpeak  (cms)=   3.502

      PEAK FLOW       (cms)=   4.031 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  55.354
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.541

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.46

      Unit Hyd Qpeak  (cms)=   4.557

      PEAK FLOW       (cms)=   5.203 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  55.231
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.540

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 --------------------------------------------------------------------------------
 --------------------
 | READ HYD (  0400)|   AREA       (ha)= 193.00
 | DT= 5.0 min      |   TPEAK     (hrs)=   6.92
 --------------------   VOLUME     (mm)=   4.39
   Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
   Comments: SPILL FROM APPLEBY TO SHELDON NORTH OF HIGHWAY 407 FOR 100-Y

   TIME    FLOW |  TIME    FLOW |  TIME    FLOW |'  TIME    FLOW |  TIME    FLOW
    hrs     cms |   hrs     cms |   hrs     cms |'   hrs     cms |   hrs     cms
   0.00   0.000 |  3.25   0.000 |  6.50   1.141 |  9.75   0.000 | 13.00   0.000
   0.08   0.000 |  3.33   0.000 |  6.58   1.409 |  9.83   0.000 | 13.08   0.000
   0.17   0.000 |  3.42   0.000 |  6.67   1.640 |  9.92   0.000 | 13.17   0.000
   0.25   0.000 |  3.50   0.000 |  6.75   1.828 | 10.00   0.000 | 13.25   0.000
   0.33   0.000 |  3.58   0.000 |  6.83   1.951 | 10.08   0.000 | 13.33   0.000
   0.42   0.000 |  3.67   0.000 |  6.92   2.008 | 10.17   0.000 | 13.42   0.000
   0.50   0.000 |  3.75   0.000 |  7.00   2.005 | 10.25   0.000 | 13.50   0.000
   0.58   0.000 |  3.83   0.000 |  7.08   1.950 | 10.33   0.000 | 13.58   0.000
   0.67   0.000 |  3.92   0.000 |  7.17   1.852 | 10.42   0.000 | 13.67   0.000
   0.75   0.000 |  4.00   0.000 |  7.25   1.722 | 10.50   0.000 | 13.75   0.000
   0.83   0.000 |  4.08   0.000 |  7.33   1.567 | 10.58   0.000 | 13.83   0.000
   0.92   0.000 |  4.17   0.000 |  7.42   1.396 | 10.67   0.000 | 13.92   0.000
   1.00   0.000 |  4.25   0.000 |  7.50   1.219 | 10.75   0.000 | 14.00   0.000
   1.08   0.000 |  4.33   0.000 |  7.58   1.047 | 10.83   0.000 | 14.08   0.000
   1.17   0.000 |  4.42   0.000 |  7.67   0.889 | 10.92   0.000 | 14.17   0.000
   1.25   0.000 |  4.50   0.000 |  7.75   0.742 | 11.00   0.000 | 14.25   0.000
   1.33   0.000 |  4.58   0.000 |  7.83   0.609 | 11.08   0.000 | 14.33   0.000
   1.42   0.000 |  4.67   0.000 |  7.92   0.486 | 11.17   0.000 | 14.42   0.000
   1.50   0.000 |  4.75   0.000 |  8.00   0.383 | 11.25   0.000 | 14.50   0.000
   1.58   0.000 |  4.83   0.000 |  8.08   0.293 | 11.33   0.000 | 14.58   0.000
   1.67   0.000 |  4.92   0.000 |  8.17   0.219 | 11.42   0.000 | 14.67   0.000
   1.75   0.000 |  5.00   0.000 |  8.25   0.160 | 11.50   0.000 | 14.75   0.000
   1.83   0.000 |  5.08   0.000 |  8.33   0.112 | 11.58   0.000 | 14.83   0.000
   1.92   0.000 |  5.17   0.000 |  8.42   0.068 | 11.67   0.000 | 14.92   0.000
   2.00   0.000 |  5.25   0.000 |  8.50   0.037 | 11.75   0.000 | 15.00   0.000
   2.08   0.000 |  5.33   0.000 |  8.58   0.019 | 11.83   0.000 | 15.08   0.000
   2.17   0.000 |  5.42   0.000 |  8.67   0.008 | 11.92   0.000 | 15.17   0.000
   2.25   0.000 |  5.50   0.000 |  8.75   0.003 | 12.00   0.000 | 15.25   0.000
   2.33   0.000 |  5.58   0.000 |  8.83   0.001 | 12.08   0.000 | 15.33   0.000
   2.42   0.000 |  5.67   0.000 |  8.92   0.000 | 12.17   0.000 | 15.42   0.000
   2.50   0.000 |  5.75   0.000 |  9.00   0.000 | 12.25   0.000 | 15.50   0.000
   2.58   0.000 |  5.83   0.000 |  9.08   0.000 | 12.33   0.000 | 15.58   0.000
   2.67   0.000 |  5.92   0.000 |  9.17   0.000 | 12.42   0.000 | 15.67   0.000
   2.75   0.000 |  6.00   0.000 |  9.25   0.000 | 12.50   0.000 | 15.75   0.000
   2.83   0.000 |  6.08   0.000 |  9.33   0.000 | 12.58   0.000 | 15.83   0.000
   2.92   0.000 |  6.17   0.009 |  9.42   0.000 | 12.67   0.000 | 15.92   0.000
   3.00   0.000 |  6.25   0.184 |  9.50   0.000 | 12.75   0.000 | 16.00   0.000
   3.08   0.000 |  6.33   0.472 |  9.58   0.000 | 12.83   0.000 |
   3.17   0.000 |  6.42   0.816 |  9.67   0.000 | 12.92   0.000 |
 --------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50010)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)     (cms)    (hrs)     (mm)
         ID1= 1 (  0400):   193.00    2.008     6.92     4.39
       + ID2= 2 ( 40010):    43.09    4.031     6.42    55.35
         ==========================================================
         ID = 3 ( 50010):   236.09    5.242     6.67    13.69

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 --------------------
 | ADD HYD  ( 50010)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)     (cms)    (hrs)     (mm)
         ID1= 3 ( 50010):   236.09    5.242     6.67    13.69
       + ID2= 2 ( 40030):    54.88    5.203     6.42    55.23
         ==========================================================
         ID = 1 ( 50010):   290.97   10.239     6.50    21.53

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60010)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                 <------ DATA FOR SECTION (   1.1) ------>
                 Distance      Elevation       Manning
                    0.00         160.98        0.0450
                   10.00         160.83        0.0450
                   20.00         160.72        0.0450
                   30.00         160.67        0.0450
                   40.00         160.61        0.0450
                   50.00         160.60        0.0450
                   60.00         160.55        0.0450
                   70.00         160.65        0.0450
                   80.00         159.78        0.0450
                   90.00         157.33    0.0450 /0.0350  Main Channel
                  100.00         157.18        0.0350      Main Channel
                  110.00         158.55        0.0450
                  120.00         160.34        0.0450
                  130.00         160.29        0.0450
                  140.00         160.30        0.0450
                  150.00         160.38        0.0450
                  160.00         160.53        0.0450
                  170.00         160.58        0.0450
                  180.00         160.51        0.0450
                  190.00         160.53        0.0450

        <---------------------- TRAVEL TIME TABLE ---------------------->
         DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)       (m)      (cu.m.)      (cms)        (m/s)      (min)
         0.15    157.33    .123E+04        0.4         0.43       57.39
         0.32    157.50    .422E+04        2.5         0.88       27.82
         0.49    157.67    .768E+04        6.3         1.20       20.47
         0.66    157.83    .116E+05       11.5         1.45       16.89
         0.83    158.00    .160E+05       18.2         1.67       14.70
         0.99    158.17    .209E+05       26.5         1.86       13.18
         1.16    158.34    .263E+05       36.3         2.03       12.06
         1.33    158.51    .321E+05       47.9         2.19       11.18
         1.50    158.68    .384E+05       62.7         2.40       10.21
         1.67    158.84    .451E+05       79.9         2.60        9.41
         1.84    159.01    .522E+05       99.0         2.79        8.79
         2.00    159.18    .597E+05      120.2         2.96        8.28
         2.17    159.35    .676E+05      143.3         3.11        7.86
         2.34    159.52    .759E+05      168.5         3.26        7.51
         2.51    159.69    .846E+05      195.8         3.40        7.20
         2.68    159.86    .938E+05      224.4         3.52        6.97
         2.85    160.02    .104E+06      254.6         3.61        6.78
         3.02    160.19    .114E+06      287.5         3.70        6.62
         3.18    160.36    .127E+06      315.8         3.64        6.72

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50010)  290.97    10.24    6.50  21.53      0.62      1.38
    OUTFLOW: ID= 1 ( 60010)  290.97     9.06    6.75  21.53      0.58      1.32



 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40020)|   Area     (ha)=  51.32
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
 --------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       33.87         17.45
      Dep. Storage     (mm)=        2.00          6.20
      Average Slope     (%)=        1.30          1.30
      Length            (m)=      584.91         50.00
      Mannings n             =      0.015         0.290

      Max.Eff.Inten.(mm/hr)=      135.12        134.70
                    over (min)        5.00         20.00
      Storage Coeff.  (min)=        6.58 (ii)    15.49 (ii)
      Unit Hyd. Tpeak (min)=        5.00         20.00
      Unit Hyd. peak  (cms)=        0.18          0.07

                                                          *TOTALS*
      PEAK FLOW       (cms)=       10.05          3.63      12.713 (iii)
      TIME TO PEAK    (hrs)=        6.08          6.25        6.08
      RUNOFF VOLUME    (mm)=      100.36         64.24       84.47
      TOTAL RAINFALL   (mm)=      102.36        102.36      102.36
      RUNOFF COEFFICIENT   =        0.98          0.63        0.83


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 --------------------------------------------------------------------------------
 --------------------
 | ADD HYD  ( 50020)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)     (cms)    (hrs)     (mm)
         ID1= 1 ( 40020):    51.32   12.713     6.08    84.47
       + ID2= 2 ( 60010):   290.97    9.063     6.75    21.53
         ==========================================================
         ID = 3 ( 50020):   342.29   14.376     6.08    30.96

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60020)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                 <------ DATA FOR SECTION (   1.1) ------>
                 Distance      Elevation       Manning
                    0.00         153.66        0.0450
                    1.00         153.24        0.0450
```

```
                  2.00        152.95        0.0450
                  3.00        152.70        0.0450
                  4.00        152.40        0.0450
                  5.00        152.09        0.0450
                  6.00        151.83        0.0450
                  7.00        151.60        0.0450
                  8.00        151.49    0.0450 /0.0350  Main Channel
                  9.00        151.42        0.0350      Main Channel
                 10.00        151.38        0.0350      Main Channel
                 11.00        151.40        0.0350      Main Channel
                 12.00        151.38        0.0350      Main Channel
                 13.00        151.38        0.0350      Main Channel
                 14.00        151.38        0.0350      Main Channel
                 15.00        151.50    0.0350 /0.0450  Main Channel
                 16.00        151.56        0.0450
                 17.00        151.60        0.0450
                 25.00        153.59        0.0450
                 26.00        153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  151.49   .140E+03        0.2         0.36      10.54
        0.23  151.60   .355E+03        0.9         0.58       6.57
        0.34  151.72   .624E+03        2.0         0.74       5.11
        0.45  151.83   .916E+03        3.6         0.89       4.27
        0.57  151.94   .123E+04        5.5         1.02       3.73
        0.68  152.05   .157E+04        7.8         1.13       3.35
        0.79  152.17   .193E+04       10.5         1.24       3.06
        0.90  152.28   .231E+04       13.6         1.34       2.83
        1.02  152.39   .271E+04       17.1         1.43       2.65
        1.13  152.50   .314E+04       20.9         1.52       2.50
        1.24  152.62   .358E+04       25.2         1.60       2.37
        1.35  152.73   .405E+04       29.8         1.67       2.26
        1.47  152.84   .454E+04       34.9         1.75       2.17
        1.58  152.95   .505E+04       40.3         1.81       2.09
        1.69  153.07   .558E+04       46.2         1.88       2.01
        1.80  153.18   .614E+04       52.6         1.95       1.95
        1.92  153.29   .672E+04       59.4         2.01       1.88
        2.03  153.40   .731E+04       66.7         2.07       1.83
        2.14  153.52   .793E+04       74.5         2.14       1.77

                                   <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50020)  342.29    14.38    6.08  30.96      0.93      1.36
OUTFLOW: ID= 1 ( 60020)  342.29    13.49    6.08  30.96      0.90      1.33



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31         18.38
     Dep. Storage     (mm)=       2.00          6.00
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     686.45         52.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     135.12        168.71
                 over (min)        5.00         20.00
     Storage Coeff.  (min)=       7.42 (ii)    15.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.17          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=      14.50          4.80         18.056 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.25          6.08
     RUNOFF VOLUME    (mm)=     100.36         68.61         87.66
     TOTAL RAINFALL   (mm)=     102.36        102.36        102.36
     RUNOFF COEFFICIENT   =       0.98          0.67          0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40040):    70.68  18.056     6.08    87.66
      + ID2= 2 ( 60020):   342.29  13.491     6.08    30.96
        ================================================
        ID = 3 ( 50220):   412.97  31.547     6.08    40.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    3.4010      4.4390
                         0.0530      0.4910   |    4.8380      5.0560
                         0.0890      0.7040   |    5.8470      5.5380
                         0.2040      1.0890   |    6.5980      5.9190
                         0.3240      1.4800   |    7.2560      6.2250
                         0.3890      1.7490   |    7.9030      6.4820
                         0.4470      1.9970   |    8.4910      6.6820
                         0.5090      2.3490   |   12.0680      7.1150
                         0.7420      2.9150   |   20.0000      7.2000
                         1.7580      3.6690   |    0.0000      0.0000

                             AREA     QPEAK     TPEAK       R.V.
                             (ha)     (cms)     (hrs)       (mm)
INFLOW : ID= 2 ( 50220)    412.973    31.547     6.08       40.67
OUTFLOW: ID= 1 ( 70010)    412.973    14.080     6.83       40.66
OVERFLOW:ID= 3 (  0003)      0.000     0.000     0.00        0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =      0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 44.63
                  TIME SHIFT OF PEAK FLOW         (min)= 45.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  7.1414

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  --------------------------
  | Junction Command(70011) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
INFLOW : ID= 3( 70010)     0.00      0.00    0.00     0.00
OUTFLOW: ID= 2( 70011)     0.00      0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   412.97  14.080     6.83    40.66
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 70012):   412.97  14.080     6.83    40.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         148.49         0.0450
                  3.00         148.12         0.0450
                  6.00         148.07         0.0450
                  9.00         147.63         0.0450
                 12.00         147.56         0.0450
                 15.00         147.55         0.0450
                 18.00         147.46         0.0450
                 21.00         147.41         0.0450
                 24.00         147.36         0.0450
                 27.00         147.38         0.0450
                 30.00         147.22         0.0450
                 33.00         147.00         0.0450
                 36.00         146.34         0.0450
                 39.00         145.57         0.0350      Main Channel
                 42.00         145.39         0.0350      Main Channel
                 45.00         145.66         0.0350      Main Channel
                 48.00         146.68         0.0450
                 51.00         147.50         0.0450
                 55.00         148.22         0.0450
                 60.00         148.42         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  145.48   .145E+03        0.0         0.25      83.65
        0.18  145.57   .581E+03        0.2         0.40      52.70
        0.35  145.74   .189E+04        1.1         0.73      29.09
        0.52  145.91   .348E+04        2.7         0.99      21.52
        0.68  146.07   .532E+04        5.0         1.19      17.84
        0.85  146.24   .740E+04        7.9         1.36      15.60
        1.02  146.41   .973E+04       11.5         1.51      14.07
        1.19  146.58   .123E+05       15.9         1.64      12.94
        1.35  146.74   .152E+05       21.2         1.78      11.93
        1.52  146.91   .183E+05       27.8         1.94      10.99
        1.69  147.08   .218E+05       35.0         2.05      10.39
        1.86  147.25   .259E+05       43.0         2.12      10.03
        2.02  147.41   .309E+05       50.6         2.09      10.18
        2.19  147.58   .383E+05       61.5         2.05      10.37
        2.36  147.75   .474E+05       77.1         2.07      10.25
        2.52  147.91   .571E+05       95.6         2.14       9.95
        2.69  148.08   .672E+05      116.0         2.20       9.65
        2.86  148.25   .783E+05      138.1         2.25       9.45
        3.03  148.42   .904E+05      163.4         2.31       9.22

                                   <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 70012)  412.97    14.08    6.83  40.66      1.12      1.59
OUTFLOW: ID= 1 ( 60040)  412.97    12.12    7.00  40.66      1.04      1.53



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94         19.34
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       3.30          3.30
     Length            (m)=     590.36         68.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     135.12        151.09
                 over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.01 (ii)    12.42 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       9.30          5.25         14.000 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17          6.08
     RUNOFF VOLUME    (mm)=     100.36         68.22         83.97
     TOTAL RAINFALL   (mm)=     102.36        102.36        102.36
     RUNOFF COEFFICIENT   =       0.98          0.67          0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40050):    52.28  14.000     6.08    83.97
      + ID2= 2 ( 60040):   412.97  12.119     7.00    40.66
        ================================================
        ID = 3 ( 50040):   465.25  14.793     6.08    45.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         146.35         0.0450
                 16.00         145.17         0.0450
                 18.00         144.62         0.0450
                 20.00         143.50         0.0450
                 26.00         141.63         0.0350      Main Channel
                 30.00         142.17         0.0350      Main Channel
                 34.00         144.28         0.0450
                 38.00         145.27         0.0450
                 50.00         146.42         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25  141.88   .129E+03        0.2         0.54      12.17
        0.50  142.13   .516E+03        1.1         0.86       7.67
        0.74  142.38   .111E+04        3.4         1.21       5.42
        0.99  142.63   .184E+04        7.0         1.50       4.37
        1.24  142.87   .269E+04       11.9         1.75       3.76
        1.49  143.12   .366E+04       18.2         1.96       3.36
        1.74  143.37   .476E+04       25.9         2.15       3.06
        1.98  143.62   .597E+04       35.3         2.33       2.82
        2.23  143.87   .729E+04       46.5         2.52       2.61
        2.48  144.11   .869E+04       59.3         2.69       2.44
        2.73  144.36   .102E+05       74.3         2.88       2.28
        2.97  144.61   .118E+05       92.4         3.09       2.13
        3.22  144.86   .136E+05      111.6         3.24       2.03
        3.47  145.11   .156E+05      133.1         3.37       1.95
        3.72  145.35   .178E+05      152.6         3.38       1.94
        3.97  145.60   .206E+05      175.6         3.37       1.95
        4.21  145.85   .239E+05      204.3         3.37       1.95
        4.46  146.10   .279E+05      238.6         3.38       1.95
        4.71  146.35   .324E+05      279.0         3.40       1.93

                                   <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50040)  465.25    14.79    6.08  45.52      1.35      1.84
OUTFLOW: ID= 1 ( 60050)  465.25    13.53    6.08  45.52      1.30      1.79



--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
```

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	142.52	0.0450	
2.00	142.41	0.0450	
4.00	142.26	0.0450	
6.00	142.08	0.0450	
8.00	141.85	0.0450	
10.00	141.61	0.0450	
12.00	141.38	0.0450	
14.00	141.11	0.0450	
16.00	140.93	0.0450	
18.00	140.83	0.0450	
20.00	140.73	0.0350	Main Channel
22.00	140.55	0.0350	Main Channel
24.00	140.49	0.0350	Main Channel
26.00	140.65	0.0350	Main Channel
28.00	141.04	0.0450	
30.00	141.72	0.0450	
32.00	142.19	0.0450	
40.00	142.50	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	140.57	.466E+02	0.0	0.23	24.59
0.15	140.65	.155E+03	0.2	0.38	14.98
0.23	140.73	.305E+03	0.5	0.51	11.12
0.34	140.84	.598E+03	1.2	0.68	8.29
0.45	140.95	.995E+03	2.3	0.80	7.09
0.56	141.06	.147E+04	3.9	0.91	6.22
0.68	141.17	.201E+04	6.1	1.04	5.45
0.79	141.28	.259E+04	8.8	1.16	4.89
0.90	141.39	.321E+04	12.0	1.27	4.47
1.01	141.50	.389E+04	15.6	1.36	4.16
1.12	141.61	.461E+04	19.7	1.45	3.90
1.23	141.72	.537E+04	24.3	1.54	3.69
1.34	141.84	.619E+04	29.4	1.61	3.52
1.45	141.95	.707E+04	35.0	1.68	3.37
1.56	142.06	.799E+04	41.1	1.75	3.24
1.67	142.17	.898E+04	47.8	1.81	3.13
1.79	142.28	.101E+05	54.6	1.85	3.07
1.90	142.39	.113E+05	62.1	1.87	3.03
2.01	142.50	.127E+05	70.3	1.88	3.01

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50060)	465.25	13.53	6.08	45.52	0.95	1.31
OUTFLOW: ID= 1 (60060)	465.25	13.34	7.08	45.52	0.94	1.30

CALIB	STANDHYD (40060)	ID= 1 DT= 5.0 min	Area (ha)= 2.84	Total Imp(%)= 33.12	Dir. Conn.(%)= 26.27

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.94	1.90
Dep. Storage (mm)=	2.00	7.70
Average Slope (%)=	2.60	2.60
Length (m)=	137.56	98.00
Mannings n =	0.015	0.320
Max.Eff.Inten.(mm/hr)=	135.12	111.58
over (min)	5.00	15.00
Storage Coeff. (min)=	2.24 (ii)	14.64 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.30	0.08

		TOTALS
PEAK FLOW (cms)=	0.28	0.37	0.601 (iii)
TIME TO PEAK (hrs)=	6.08	6.17	6.08
RUNOFF VOLUME (mm)=	100.36	64.15	73.66
TOTAL RAINFALL (mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT =	0.98	0.63	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50070)	1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (40060):		2.84	0.601	6.08	73.66
	+ ID2= 2 (60060):		465.25	13.342	7.08	45.52
	ID = 3 (50070):		468.09	13.463	6.17	45.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	STANDHYD (40080)	ID= 1 DT= 5.0 min	Area (ha)= 39.85	Total Imp(%)= 66.00	Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	26.30	13.55
Dep. Storage (mm)=	2.00	5.60
Average Slope (%)=	1.40	1.40
Length (m)=	515.42	72.00
Mannings n =	0.015	0.270
Max.Eff.Inten.(mm/hr)=	135.12	141.94
over (min)	5.00	20.00
Storage Coeff. (min)=	5.97 (ii)	16.14 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.19	0.06

		TOTALS
PEAK FLOW (cms)=	7.65	3.05	9.899 (iii)
TIME TO PEAK (hrs)=	6.08	6.25	6.08
RUNOFF VOLUME (mm)=	100.36	67.82	85.39
TOTAL RAINFALL (mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT =	0.98	0.66	0.83

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50080)	1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (40080):		39.85	9.899	6.08	85.39
	+ ID2= 2 (50070):		468.09	13.463	6.17	45.69
	ID = 3 (50080):		507.94	22.087	6.08	48.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60080)
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	141.24	0.0450	
40.00	140.58	0.0450	
50.00	140.57	0.0450	
60.00	140.36	0.0450	
70.00	140.19	0.0450	
80.00	140.15	0.0450	
90.00	139.70	0.0450	
100.00	139.54	0.0350	Main Channel
110.00	139.97	0.0450	
120.00	140.53	0.0450	
130.00	140.63	0.0450	
140.00	140.72	0.0450	
150.00	140.87	0.0450	
190.00	141.16	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.09	139.63	.150E+03	0.1	0.18	43.53
0.17	139.71	.598E+03	0.4	0.30	27.01
0.26	139.80	.126E+04	1.1	0.42	19.24
0.34	139.88	.209E+04	2.2	0.52	15.58
0.43	139.97	.307E+04	3.8	0.60	13.36
0.51	140.05	.420E+04	6.1	0.70	11.45
0.60	140.14	.548E+04	9.0	0.79	10.19
0.68	140.22	.714E+04	11.3	0.76	10.55
0.77	140.31	.919E+04	15.7	0.82	9.77
0.85	140.39	.115E+05	21.0	0.88	9.11
0.94	140.48	.141E+05	27.4	0.94	8.54
1.02	140.56	.169E+05	34.6	0.99	8.12
1.11	140.65	.205E+05	41.1	0.97	8.32
1.19	140.74	.248E+05	51.5	1.00	8.02
1.28	140.82	.296E+05	64.0	1.04	7.70
1.36	140.91	.348E+05	78.0	1.08	7.44
1.45	140.99	.407E+05	93.6	1.11	7.24
1.53	141.08	.472E+05	111.7	1.14	7.05
1.62	141.16	.545E+05	132.2	1.17	6.87

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50080)	507.94	22.09	6.08	48.81	0.87	0.89
OUTFLOW: ID= 1 (60080)	507.94	18.04	6.25	48.81	0.80	0.85

CALIB	STANDHYD (40090)	ID= 1 DT= 5.0 min	Area (ha)= 4.45	Total Imp(%)= 22.23	Dir. Conn.(%)= 13.77

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.99	3.46
Dep. Storage (mm)=	2.00	9.68
Average Slope (%)=	2.40	2.40
Length (m)=	172.19	99.00
Mannings n =	0.015	0.370
Max.Eff.Inten.(mm/hr)=	135.12	95.37
over (min)	5.00	20.00
Storage Coeff. (min)=	2.63 (ii)	17.47 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.29	0.06

		TOTALS
PEAK FLOW (cms)=	0.23	0.50	0.579 (iii)
TIME TO PEAK (hrs)=	6.08	6.25	6.08
RUNOFF VOLUME (mm)=	100.36	54.25	60.60
TOTAL RAINFALL (mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT =	0.98	0.53	0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50090)	1 + 2 = 3		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (40090):		4.45	0.579	6.08	60.60
	+ ID2= 2 (60080):		507.94	18.039	6.25	48.81
	ID = 3 (50090):		512.39	18.573	6.25	48.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60100)
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	138.71	0.0450	
4.00	136.97	0.0450	
28.00	135.94	0.0450	
32.00	135.79	0.0350	Main Channel
36.00	135.23	0.0350	Main Channel
40.00	135.71	0.0350 /0.0450	Main Channel
54.00	136.96	0.0450	
80.00	138.63	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	135.39	.631E+02	0.1	0.44	12.42
0.31	135.55	.253E+03	0.5	0.69	7.83
0.47	135.71	.568E+03	1.6	0.91	5.97
0.65	135.89	.114E+04	4.2	1.20	4.52
0.84	136.07	.209E+04	8.7	1.35	4.02
1.02	136.25	.342E+04	15.4	1.47	3.70
1.20	136.44	.511E+04	24.8	1.58	3.44
1.38	136.62	.718E+04	37.2	1.69	3.21
1.57	136.80	.962E+04	53.1	1.79	3.02
1.75	136.98	.124E+05	72.7	1.90	2.85
1.93	137.17	.155E+05	97.8	2.05	2.64
2.11	137.35	.188E+05	127.1	2.20	2.47
2.30	137.53	.223E+05	160.4	2.34	2.31
2.48	137.71	.259E+05	197.8	2.48	2.19
2.66	137.90	.298E+05	239.5	2.61	2.07
2.85	138.08	.339E+05	285.4	2.74	1.98
3.03	138.26	.381E+05	335.6	2.86	1.89
3.21	138.44	.426E+05	390.3	2.98	1.82
3.39	138.63	.472E+05	449.4	3.10	1.75

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50090)	512.39	18.57	6.25	48.91	1.08	1.50
OUTFLOW: ID= 1 (60100)	512.39	18.20	6.25	48.91	1.07	1.50

CALIB	STANDHYD (40100)	ID= 1 DT= 5.0 min	Area (ha)= 26.90	Total Imp(%)= 46.31	Dir. Conn.(%)= 42.42

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	12.46	14.44
Dep. Storage (mm)=	2.00	6.20
Average Slope (%)=	1.40	1.40
Length (m)=	423.45	125.00
Mannings n =	0.015	0.280
Max.Eff.Inten.(mm/hr)=	135.12	89.15
over (min)	5.00	25.00
Storage Coeff. (min)=	5.30 (ii)	22.74 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.21	0.05

```
                                                        *TOTALS*
     PEAK FLOW       (cms)=       4.12         2.03          5.375 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=     100.36        64.33          79.62
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.63           0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40100):    26.90   5.375     6.08    79.62
     + ID2= 2 ( 60100):   512.39  18.202     6.25    48.91
       ================================================
       ID = 3 ( 50110):   539.28  21.231     6.25    50.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

     Unit Hyd Qpeak  (cms)=   3.961

     PEAK FLOW       (cms)=   4.632 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  57.710
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

     Unit Hyd Qpeak  (cms)=   4.875

     PEAK FLOW       (cms)=   6.291 (i)
     TIME TO PEAK    (hrs)=   6.500
     RUNOFF VOLUME    (mm)=  60.756
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.594

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40120):    44.60   4.632     6.42    57.71
     + ID2= 2 ( 40130):    63.82   6.291     6.50    60.76
       ================================================
       ID = 3 ( 50130):   108.42  10.921     6.42    59.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.27        0.0450
                   2.00        155.23        0.0450
                   4.00        155.21        0.0450
                   6.00        155.08        0.0450
                   8.00        154.94        0.0450
                  10.00        154.68        0.0450
                  12.00        154.21        0.0450
                  14.00        153.90        0.0450
                  16.00        153.41        0.0350      Main Channel
                  18.00        153.58        0.0350      Main Channel
                  20.00        153.72    0.0350 /0.0450  Main Channel
                  22.00        153.77        0.0450
                  24.00        153.77        0.0450
                  26.00        153.82        0.0450
                  28.00        153.79        0.0450
                  30.00        153.87        0.0450
                  32.00        153.99        0.0450
                  34.00        154.44        0.0450
                  36.00        154.86        0.0450
                  40.00        155.37        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  153.50    .107E+03       0.0         0.27       87.23
        0.20  153.60    .429E+03       0.1         0.42       55.65
        0.29  153.70    .991E+03       0.4         0.55       42.98
        0.39  153.80    .201E+04       0.9         0.66       35.52
        0.49  153.90    .408E+04       2.1         0.71       33.15
        0.59  153.99    .651E+04       3.7         0.81       29.01
        0.69  154.09    .916E+04       6.1         0.93       25.22
        0.79  154.19    .120E+05       8.9         1.05       22.39
        0.88  154.29    .149E+05      12.3         1.16       20.20
        0.98  154.39    .179E+05      16.2         1.27       18.49
        1.08  154.49    .211E+05      20.5         1.37       17.13
        1.18  154.58    .244E+05      25.4         1.47       16.02
        1.28  154.68    .278E+05      30.7         1.56       15.10
        1.37  154.78    .314E+05      36.4         1.63       14.38
        1.47  154.88    .351E+05      42.5         1.71       13.77
        1.57  154.98    .391E+05      48.9         1.76       13.33
        1.67  155.07    .433E+05      55.6         1.81       12.98
        1.77  155.17    .478E+05      63.0         1.86       12.65
        1.86  155.27    .528E+05      69.8         1.86       12.62

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42    10.92     6.42   59.50      0.84      1.11
   OUTFLOW: ID= 1 ( 60130)  108.42     8.87     6.75   59.50      0.78      1.05


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      46.69         19.07
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     662.12         66.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     135.12        134.56
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       7.09 (ii)    17.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.17          0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=      13.84          3.91         16.684 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.25           6.08
     RUNOFF VOLUME    (mm)=     100.36         64.38          86.33
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.98          0.63           0.84

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40140):    65.76  16.684     6.08    86.33
     + ID2= 2 ( 60130):   108.42   8.874     6.75    59.50
       ================================================
       ID = 3 ( 50180):   174.18  18.837     6.08    69.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.55          3.33
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       1.00          1.00
     Length            (m)=     304.26         66.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     135.12        106.72
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       4.81 (ii)    17.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.22          0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       3.70          0.54          4.081 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.25           6.08
     RUNOFF VOLUME    (mm)=     100.36         60.51          89.60
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.98          0.59           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.74          8.05
     Dep. Storage     (mm)=       2.00          8.12
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     303.13        131.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     135.12         74.52
                   over (min)        5.00         25.00
     Storage Coeff.  (min)=       3.69 (ii)    22.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.25          0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.98          0.95          2.541 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.33           6.08
     RUNOFF VOLUME    (mm)=     100.36         54.81          72.41
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.98          0.54           0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.90        0.0450
                   1.00        154.69        0.0450
                   2.00        154.30        0.0450
                   3.00        154.00    0.0450 /0.0350  Main Channel
                   4.00        153.74        0.0350      Main Channel
                   5.00        153.51        0.0350      Main Channel
                   6.00        153.46        0.0350      Main Channel
                   7.00        153.77        0.0350      Main Channel
                   8.00        154.10    0.0350 /0.0450  Main Channel
                   9.00        154.50        0.0450
                  10.00        154.84        0.0450
                  11.00        155.13        0.0450
                  12.00        155.26        0.0450
                  13.00        155.32        0.0450
                  14.00        155.42        0.0450
                  15.00        155.52        0.0450
                  16.00        155.62        0.0450
                  17.00        155.69        0.0450
                  18.00        155.76        0.0450
                  20.00        155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11  153.57    .445E+02       0.0         0.32       21.18
        0.22  153.68    .135E+03       0.2         0.51       13.45
        0.33  153.79    .262E+03       0.4         0.66       10.46
        0.43  153.89    .423E+03       0.8         0.79        8.73
        0.54  154.00    .616E+03       1.3         0.90        7.61
        0.68  154.14    .900E+03       2.4         1.09        6.30
        0.81  154.27    .123E+04       3.8         1.27        5.40
        0.95  154.41    .160E+04       5.5         1.42        4.83
        1.08  154.54    .201E+04       7.6         1.55        4.43
        1.22  154.68    .246E+04       9.9         1.67        4.12
        1.35  154.81    .294E+04      12.7         1.78        3.86
        1.48  154.94    .345E+04      15.8         1.88        3.65
        1.62  155.08    .400E+04      19.2         1.97        3.48
        1.75  155.21    .458E+04      22.9         2.05        3.34
        1.89  155.35    .524E+04      26.8         2.11        3.26
        2.02  155.48    .599E+04      31.4         2.16        3.18
        2.16  155.62    .682E+04      36.5         2.20        3.12
        2.29  155.75    .774E+04      41.9         2.23        3.08
        2.43  155.89    .878E+04      48.0         2.25        3.05

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     2.54     6.08   72.41      0.69      1.11
   OUTFLOW: ID= 1 ( 60190)   13.78     2.22     6.08   72.40      0.66      1.05


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
```

```
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       17.41         5.53
     Dep. Storage     (mm)=        2.00         6.75
     Average Slope     (%)=        3.00         3.00
     Length            (m)=      391.08       150.00
     Mannings n           =       0.015        0.290

     Max.Eff.Inten.(mm/hr)=      135.12        78.26
                   over (min)      5.00        25.00
     Storage Coeff.  (min)=        4.02 (ii)   20.68 (ii)
     Unit Hyd. Tpeak (min)=        5.00        25.00
     Unit Hyd. peak  (cms)=        0.24         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        6.34         0.71          6.770 (iii)
     TIME TO PEAK    (hrs)=        6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=      100.36        57.90          89.64
     TOTAL RAINFALL   (mm)=      102.36       102.36         102.36
     RUNOFF COEFFICIENT   =        0.98         0.57           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40180):    13.89   4.081     6.08    89.60
     + ID2= 2 ( 40200):    22.94   6.770     6.08    89.64
       ==================================================
       ID = 3 ( 50200):    36.83  10.850     6.08    89.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50200):    36.83  10.850     6.08    89.62
     + ID2= 2 ( 60190):    13.78   2.219     6.08    72.40
       ==================================================
       ID = 1 ( 50200):    50.61  13.070     6.08    84.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        5.01         1.06
     Dep. Storage     (mm)=        2.00         6.27
     Average Slope     (%)=        0.90         0.90
     Length            (m)=      201.21       118.00
     Mannings n           =       0.015        0.290

     Max.Eff.Inten.(mm/hr)=      135.12        66.79
                   over (min)      5.00        30.00
     Storage Coeff.  (min)=        3.87 (ii)   25.92 (ii)
     Unit Hyd. Tpeak (min)=        5.00        30.00
     Unit Hyd. peak  (cms)=        0.25         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.84         0.12          1.900 (iii)
     TIME TO PEAK    (hrs)=        6.08         6.42           6.08
     RUNOFF VOLUME    (mm)=      100.36        57.61          92.56
     TOTAL RAINFALL   (mm)=      102.36       102.36         102.36
     RUNOFF COEFFICIENT   =        0.98         0.56           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40210):     6.07   1.900     6.08    92.56
     + ID2= 2 ( 50200):    50.61  13.070     6.08    84.93
       ==================================================
       ID = 3 ( 50210):    56.68  14.970     6.08    85.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        152.62        0.0450
                   7.00        152.39        0.0450
                   8.00        152.02        0.0450
                   9.00        151.48        0.0450
                  10.00        151.01        0.0450
                  11.00        150.56    0.0450 /0.0350  Main Channel
                  12.00        150.38        0.0350      Main Channel
                  13.00        150.40        0.0350      Main Channel
                  14.00        150.36        0.0350      Main Channel
                  15.00        150.60    0.0350 /0.0450  Main Channel
                  16.00        150.99        0.0450
                  17.00        151.50        0.0450
                  18.00        151.91        0.0450
                  19.00        152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  150.46    .580E+02       0.1          0.30      17.06
        0.20  150.56    .160E+03       0.3          0.48      10.57
        0.32  150.68    .314E+03       0.7          0.70       7.18
        0.44  150.80    .489E+03       1.4          0.89       5.71
        0.56  150.92    .686E+03       2.3          1.03       4.89
        0.69  151.04    .904E+03       3.5          1.16       4.35
        0.81  151.16    .114E+04       4.8          1.28       3.95
        0.93  151.29    .140E+04       6.4          1.38       3.66
        1.05  151.41    .167E+04       8.1          1.48       3.42
        1.17  151.53    .196E+04      10.1          1.57       3.22
        1.29  151.65    .227E+04      12.3          1.65       3.06
        1.41  151.77    .260E+04      14.8          1.73       2.93
        1.54  151.89    .295E+04      17.5          1.80       2.81
        1.66  152.01    .331E+04      20.4          1.87       2.70
        1.78  152.13    .369E+04      23.6          1.94       2.61
        1.90  152.26    .409E+04      27.0          2.00       2.52
        2.02  152.38    .451E+04      30.7          2.06       2.45
        2.14  152.50    .500E+04      33.4          2.03       2.49
        2.26  152.62    .563E+04      37.3          2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
 INFLOW : ID= 2 ( 50210)     56.68    14.97     6.08   85.75       1.42      1.73
 OUTFLOW: ID= 1 ( 60210)     56.68    14.40     6.08   85.75       1.40      1.71


--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        8.91         2.40
     Dep. Storage     (mm)=        2.00         6.17
     Average Slope     (%)=        0.60         0.60
     Length            (m)=      274.66        79.00
     Mannings n           =       0.015        0.290

     Max.Eff.Inten.(mm/hr)=      135.12        78.91
                   over (min)      5.00        25.00
     Storage Coeff.  (min)=        5.27 (ii)   23.58 (ii)
     Unit Hyd. Tpeak (min)=        5.00        25.00
     Unit Hyd. peak  (cms)=        0.21         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.18         0.29          3.355 (iii)
     TIME TO PEAK    (hrs)=        6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=      100.36        58.53          91.06
     TOTAL RAINFALL   (mm)=      102.36       102.36         102.36
     RUNOFF COEFFICIENT   =        0.98         0.57           0.89

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40220):    11.32   3.355     6.08    91.06
     + ID2= 2 ( 60210):    56.68  14.397     6.08    85.75
       ==================================================
       ID = 3 ( 50120):    68.00  17.751     6.08    86.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50120):    68.00  17.751     6.08    86.63
     + ID2= 2 ( 50180):   174.18  18.837     6.08    69.63
       ==================================================
       ID = 3 ( 50140):   242.18  36.588     6.08    74.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        152.29        0.0450
                   2.00        152.20        0.0450
                   4.00        152.17        0.0450
                   6.00        152.15        0.0450
                   8.00        151.78        0.0450
                  10.00        151.28        0.0450
                  12.00        150.79        0.0450
                  14.00        150.20    0.0450 /0.0350  Main Channel
                  16.00        149.82        0.0350      Main Channel
                  18.00        149.51        0.0350      Main Channel
                  20.00        149.24        0.0350      Main Channel
                  22.00        149.48        0.0350      Main Channel
                  24.00        150.00    0.0350 /0.0450  Main Channel
                  26.00        150.52        0.0450
                  28.00        151.14        0.0450
                  30.00        151.68        0.0450
                  32.00        152.11        0.0450
                  34.00        152.20        0.0450
                  35.00        152.27        0.0450
                  38.00        152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15  149.39    .694E+02       0.1          0.32      19.63
        0.31  149.54    .273E+03       0.4          0.53      11.92
        0.46  149.70    .577E+03       1.1          0.72       8.87
        0.61  149.85    .972E+03       2.2          0.87       7.30
        0.76  150.00    .145E+04       3.9          1.01       6.26
        0.93  150.16    .205E+04       6.4          1.18       5.36
        1.09  150.33    .274E+04       9.9          1.37       4.62
        1.25  150.49    .350E+04      14.2          1.54       4.11
        1.42  150.65    .434E+04      19.3          1.69       3.75
        1.58  150.82    .524E+04      25.2          1.83       3.47
        1.74  150.98    .621E+04      31.8          1.95       3.26
        1.91  151.14    .726E+04      39.2          2.06       3.09
        2.07  151.31    .839E+04      47.5          2.16       2.94
        2.23  151.47    .959E+04      56.6          2.25       2.82
        2.40  151.63    .109E+05      66.7          2.34       2.72
        2.56  151.80    .122E+05      77.6          2.41       2.63
        2.72  151.96    .137E+05      89.3          2.48       2.55
        2.89  152.12    .153E+05     102.0          2.55       2.49
        3.05  152.29    .172E+05     111.6          2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
 INFLOW : ID= 2 ( 50140)     242.18    36.59     6.08   74.40       1.85      2.02
 OUTFLOW: ID= 1 ( 60140)     242.18    34.42     6.08   74.40       1.80      1.99


--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        151.02        0.0450
                   2.00        150.89        0.0450
                   4.00        150.73        0.0450
                   6.00        150.65        0.0450
                   8.00        150.38        0.0450
                  10.00        149.93        0.0450
                  12.00        149.51        0.0450
                  14.00        149.02    0.0450 /0.0350  Main Channel
                  16.00        148.64        0.0350      Main Channel
                  18.00        148.27        0.0350      Main Channel
                  20.00        148.39        0.0350      Main Channel
                  22.00        148.60        0.0350      Main Channel
                  24.00        148.94    0.0350 /0.0450  Main Channel
                  26.00        149.34        0.0450
                  28.00        149.66        0.0450
                  30.00        150.12        0.0450
                  32.00        150.45        0.0450
                  34.00        150.52        0.0450
                  36.00        150.60        0.0450
                  38.00        150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11  148.38    .283E+02       0.0          0.26      13.34
        0.22  148.49    .107E+03       0.2          0.44       7.98
        0.34  148.60    .226E+03       0.6          0.58       6.07
        0.45  148.72    .380E+03       1.3          0.72       4.90
        0.56  148.83    .563E+03       2.2          0.84       4.20
        0.67  148.94    .775E+03       3.5          0.95       3.72
        0.80  149.07    .105E+04       5.5          1.11       3.17
        0.93  149.20    .136E+04       8.2          1.27       2.77
        1.06  149.32    .170E+04      11.3          1.41       2.50
        1.18  149.45    .207E+04      14.9          1.52       2.31
        1.31  149.58    .248E+04      19.1          1.63       2.17
```

```
                                                <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 60140)  242.18    34.42    6.08  74.40      1.68      1.88
   OUTFLOW: ID= 1 ( 60150)  242.18    33.02    6.17  74.40      1.65      1.86
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.11	2.26
Dep. Storage (mm)=	2.00	6.34
Average Slope (%)=	2.30	2.30
Length (m)=	189.18	45.00
Mannings n =	0.015	0.290
Max.Eff.Inten.(mm/hr)=	135.12	113.83
over (min)	5.00	15.00
Storage Coeff. (min)=	2.82 (ii)	10.36 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.28	0.09

		TOTALS
PEAK FLOW (cms)=	1.05	0.49	1.484 (iii)
TIME TO PEAK (hrs)=	6.08	6.17	6.08
RUNOFF VOLUME (mm)=	100.36	61.30	81.66
TOTAL RAINFALL (mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT =	0.98	0.60	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50160) | 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40150):	5.37	1.484	6.08	81.66
+ ID2= 2 (60150):	242.18	33.018	6.17	74.40
ID = 3 (50160):	247.54	34.339	6.08	74.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB / STANDHYD (40240) | ID= 1 DT= 5.0 min	Area (ha)= 10.28	Total Imp(%)= 85.45	Dir. Conn.(%)= 84.88

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.79	1.50
Dep. Storage (mm)=	2.00	5.70
Average Slope (%)=	3.40	3.40
Length (m)=	261.85	70.00
Mannings n =	0.015	0.270
Max.Eff.Inten.(mm/hr)=	135.12	100.14
over (min)	5.00	10.00
Storage Coeff. (min)=	3.05 (ii)	6.91 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.27	0.14

		TOTALS
PEAK FLOW (cms)=	3.26	0.34	3.603 (iii)
TIME TO PEAK (hrs)=	6.08	6.08	6.08
RUNOFF VOLUME (mm)=	100.36	58.82	94.08
TOTAL RAINFALL (mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT =	0.98	0.57	0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB / STANDHYD (40250) | ID= 1 DT= 5.0 min	Area (ha)= 13.36	Total Imp(%)= 64.44	Dir. Conn.(%)= 62.89

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.61	4.75
Dep. Storage (mm)=	2.00	7.14
Average Slope (%)=	2.00	2.00
Length (m)=	298.43	70.00
Mannings n =	0.015	0.320
Max.Eff.Inten.(mm/hr)=	135.12	92.67
over (min)	5.00	20.00
Storage Coeff. (min)=	3.86 (ii)	15.67 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.25	0.07

		TOTALS
PEAK FLOW (cms)=	3.11	0.70	3.612 (iii)
TIME TO PEAK (hrs)=	6.08	6.25	6.08
RUNOFF VOLUME (mm)=	100.36	56.52	84.09
TOTAL RAINFALL (mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT =	0.98	0.55	0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(60240) | IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>			
Distance	Elevation	Manning	
0.00	155.56	0.0450	
2.00	155.23	0.0450	
4.00	154.58	0.0450	
6.00	153.92	0.0450	
8.00	153.53	0.0450	
10.00	152.64	0.0450	
12.00	152.43	0.0450 /0.0350	Main Channel
14.00	152.24	0.0350	Main Channel
16.00	152.07	0.0350	Main Channel
18.00	152.30	0.0350 /0.0450	Main Channel
20.00	152.46	0.0450	
22.00	155.55	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	152.18	.895E+02	0.1	0.43	24.33
0.24	152.30	.356E+03	0.4	0.69	15.20
0.43	152.49	.118E+04	2.1	1.10	9.55
0.62	152.68	.234E+04	5.5	1.48	7.09
0.81	152.88	.361E+04	10.4	1.83	5.76
1.00	153.07	.494E+04	16.7	2.13	4.94
1.19	153.26	.634E+04	24.2	2.40	4.38
1.38	153.45	.781E+04	32.8	2.65	3.97
1.58	153.64	.936E+04	42.5	2.86	3.67
1.77	153.83	.110E+05	53.3	3.05	3.45
1.96	154.02	.128E+05	65.6	3.23	3.26
2.15	154.21	.147E+05	79.4	3.40	3.09
2.34	154.40	.167E+05	94.5	3.57	2.95
2.53	154.60	.188E+05	111.0	3.73	2.82
2.72	154.79	.209E+05	128.7	3.89	2.71
2.91	154.98	.231E+05	147.8	4.03	2.61
3.10	155.17	.255E+05	168.3	4.17	2.52
3.30	155.36	.279E+05	189.2	4.28	2.46
3.49	155.55	.305E+05	211.3	4.38	2.40

```
                                                <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     3.61    6.08  84.09      0.51      1.25
   OUTFLOW: ID= 1 ( 60240)   13.36     2.99    6.08  84.08      0.48      1.18
```

ADD HYD (50250) | 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40240):	10.28	3.603	6.08	94.08
+ ID2= 2 (50160):	247.54	34.339	6.08	74.56
ID = 3 (50250):	257.83	37.943	6.08	75.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50250) | 3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50250):	257.83	37.943	6.08	75.34
+ ID2= 2 (60240):	13.36	2.995	6.08	84.08
ID = 1 (50250):	271.19	40.937	6.08	75.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60250) | IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>			
Distance	Elevation	Manning	
0.00	149.47	0.0450	
3.00	149.39	0.0450	
6.00	149.18	0.0450	
9.00	148.85	0.0450	
12.00	148.60	0.0450	
15.00	148.16	0.0450	
18.00	147.81	0.0450	
21.00	147.50	0.0450	
24.00	147.26	0.0350	Main Channel
27.00	146.88	0.0350	Main Channel
30.00	146.72	0.0350	Main Channel
33.00	147.27	0.0350 /0.0450	Main Channel
36.00	147.60	0.0450	
39.00	147.71	0.0450	
42.00	148.10	0.0450	
45.00	148.90	0.0450	
48.00	149.05	0.0450	
51.00	149.12	0.0450	
54.00	149.43	0.0450	
57.00	149.67	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.14	146.85	.156E+03	0.1	0.30	40.24
0.27	146.99	.583E+03	0.4	0.51	23.51
0.41	147.13	.119E+04	1.1	0.68	17.78
0.54	147.26	.198E+04	2.2	0.82	14.76
0.69	147.41	.309E+04	4.3	1.02	11.88
0.84	147.56	.455E+04	7.2	1.15	10.50
0.98	147.70	.637E+04	10.9	1.24	9.73
1.13	147.85	.862E+04	15.8	1.32	9.12
1.28	148.00	.111E+05	21.7	1.41	8.55
1.42	148.14	.139E+05	28.7	1.50	8.06
1.57	148.29	.169E+05	37.1	1.59	7.58
1.72	148.44	.200E+05	46.5	1.68	7.16
1.87	148.58	.233E+05	57.0	1.77	6.80
2.01	148.73	.268E+05	68.3	1.85	6.53
2.16	148.88	.305E+05	80.9	1.92	6.28
2.31	149.02	.345E+05	93.2	1.95	6.17
2.45	149.17	.391E+05	106.6	1.97	6.11
2.60	149.32	.441E+05	123.2	2.02	5.97
2.75	149.47	.495E+05	139.7	2.04	5.91

```
                                                <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    40.94    6.08  75.77      1.63      1.63
   OUTFLOW: ID= 1 ( 60250)  271.19    34.83    6.17  75.77      1.53      1.56
```

CALIB / STANDHYD (40260) | ID= 1 DT= 5.0 min	Area (ha)= 28.45	Total Imp(%)= 56.00	Dir. Conn.(%)= 43.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	15.93	12.52
Dep. Storage (mm)=	2.00	6.70
Average Slope (%)=	1.30	1.30
Length (m)=	435.49	46.00
Mannings n =	0.015	0.300
Max.Eff.Inten.(mm/hr)=	135.12	132.59
over (min)	5.00	15.00
Storage Coeff. (min)=	5.52 (ii)	14.22 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.20	0.08

		TOTALS
PEAK FLOW (cms)=	4.39	2.79	6.842 (iii)
TIME TO PEAK (hrs)=	6.08	6.17	6.08
RUNOFF VOLUME (mm)=	100.36	62.89	79.00
TOTAL RAINFALL (mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT =	0.98	0.61	0.77

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50260) | 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40260):	28.45	6.842	6.08	79.00
+ ID2= 2 (60250):	271.19	34.829	6.17	75.77
ID = 3 (50260):	299.64	39.762	6.17	76.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
---------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        143.17        0.0450
                    4.00        143.15        0.0450
                    8.00        143.14        0.0450
                   12.00        142.95        0.0450
                   16.00        142.87        0.0450
                   20.00        142.67        0.0450
                   24.00        142.24        0.0450
                   28.00        141.84        0.0450
                   32.00        141.61        0.0450
                   36.00        141.32        0.0450
                   40.00        140.98        0.0450
                   44.00        140.88        0.0450
                   48.00        139.95        0.0350      Main Channel
                   52.00        140.09        0.0350      Main Channel
                   56.00        141.11        0.0450
                   60.00        141.43        0.0450
                   76.00        143.21        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.17  140.12    .479E+03        0.2         0.48      36.89
        0.34  140.29    .147E+04        1.2         0.86      20.63
        0.51  140.46    .272E+04        2.9         1.12      15.78
        0.68  140.63    .421E+04        5.3         1.33      13.28
        0.85  140.80    .596E+04        8.5         1.51      11.69
        1.02  140.97    .812E+04       12.0         1.56      11.29
        1.19  141.14    .111E+05       17.6         1.68      10.52
        1.36  141.31    .147E+05       25.4         1.83       9.67
        1.53  141.48    .191E+05       34.9         1.93       9.14
        1.70  141.65    .242E+05       46.4         2.03       8.71
        1.87  141.81    .301E+05       59.9         2.11       8.38
        2.04  141.98    .367E+05       76.6         2.21       7.99
        2.21  142.15    .439E+05       95.9         2.31       7.63
        2.37  142.32    .517E+05      117.9         2.42       7.30
        2.54  142.49    .600E+05      142.7         2.52       7.01
        2.71  142.66    .689E+05      170.3         2.62       6.74
        2.88  142.83    .785E+05      198.2         2.68       6.60
        3.05  143.00    .892E+05      225.9         2.68       6.58
        3.22  143.17    .101E+06      250.7         2.63       6.73

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50260)  299.64    39.76    6.17  76.08      1.60      1.97
    OUTFLOW: ID= 1 ( 60260)  299.64    34.09    6.33  76.07      1.51      1.92


---------------------
| CALIB             |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
---------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.12         6.71
      Dep. Storage     (mm)=       2.00         8.03
      Average Slope     (%)=       1.10         1.10
      Length            (m)=     256.01        73.00
      Mannings n           =      0.015        0.330

      Max.Eff.Inten.(mm/hr)=     135.12       110.24
                    over (min)       5.00        20.00
      Storage Coeff.  (min)=       4.22 (ii)   17.98 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.24         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.80         1.11          1.594 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.25          6.08
      RUNOFF VOLUME    (mm)=     100.36        61.16         69.78
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.60          0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  80.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


---------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40270):     9.83   1.594     6.08    69.78
      + ID2= 2 ( 60260):   299.64  34.087     6.33    76.07
        ================================================
        ID = 3 ( 50270):   309.47  35.331     6.25    75.87

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


---------------------
| CALIB             |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
---------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.16        11.14
      Dep. Storage     (mm)=       2.00         7.27
      Average Slope     (%)=       1.10         1.10
      Length            (m)=     456.83        53.00
      Mannings n           =      0.015        0.310

      Max.Eff.Inten.(mm/hr)=     135.12       129.83
                    over (min)       5.00        20.00
      Storage Coeff.  (min)=       5.97 (ii)   16.21 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.19         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.75         2.28          7.397 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.25          6.08
      RUNOFF VOLUME    (mm)=     100.36        61.27         81.47
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.60          0.80

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  76.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


---------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40280):    31.30   7.397     6.08    81.47
      + ID2= 2 ( 50270):   309.47  35.331     6.25    75.87
        ================================================
        ID = 3 ( 50280):   340.77  39.356     6.25    76.39

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


---------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        139.35        0.0450
                    3.00        139.19        0.0450
                    6.00        138.46        0.0450
                   27.00        137.71        0.0450
                   30.00        137.44        0.0350      Main Channel
                   33.00        137.26        0.0350      Main Channel
                   36.00        137.51        0.0350      Main Channel
                   39.00        137.64    0.0350 /0.0450  Main Channel
                   42.00        137.71        0.0450
                   57.00        139.35        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  137.35    .361E+02        0.0         0.30      17.09
        0.18  137.44    .145E+03        0.2         0.48      10.76
        0.30  137.55    .369E+03        0.8         0.68       7.57
        0.41  137.67    .717E+03        1.9         0.82       6.28
        0.52  137.78    .124E+04        3.9         0.97       5.27
        0.63  137.89    .192E+04        6.8         1.10       4.67
        0.74  138.00    .273E+04       10.7         1.20       4.25
        0.86  138.11    .369E+04       15.7         1.30       3.93
        0.97  138.23    .480E+04       21.8         1.39       3.67
        1.08  138.34    .605E+04       29.1         1.48       3.46
        1.19  138.45    .745E+04       37.8         1.56       3.28
        1.31  138.56    .895E+04       48.6         1.67       3.07
        1.42  138.68    .105E+05       60.8         1.78       2.88
        1.53  138.79    .121E+05       74.4         1.89       2.71
        1.64  138.90    .138E+05       89.3         1.99       2.57
        1.76  139.01    .155E+05      105.5         2.10       2.44
        1.87  139.13    .172E+05      123.0         2.19       2.33
        1.98  139.24    .190E+05      140.8         2.27       2.25
        2.09  139.35    .209E+05      159.0         2.33       2.20

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50280)  340.77    39.36    6.25  76.39      1.21      1.57
    OUTFLOW: ID= 1 ( 60280)  340.77    39.00    6.33  76.39      1.21      1.57


---------------------
| CALIB             |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
---------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       6.71         4.81
      Dep. Storage     (mm)=       2.00         7.99
      Average Slope     (%)=       1.60         1.60
      Length            (m)=     277.19        63.00
      Mannings n           =      0.015        0.340

      Max.Eff.Inten.(mm/hr)=     135.12       122.81
                    over (min)       5.00        15.00
      Storage Coeff.  (min)=       3.95 (ii)   14.93 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.24         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.92         1.01          2.796 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.17          6.08
      RUNOFF VOLUME    (mm)=     100.36        59.46         77.85
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.58          0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  76.3    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


---------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40300):    11.53   2.796     6.08    77.85
      + ID2= 2 ( 60280):   340.77  39.001     6.33    76.39
        ================================================
        ID = 3 ( 50300):   352.30  40.071     6.33    76.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


---------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        137.26        0.0450
                    4.00        136.94        0.0450
                    8.00        136.82        0.0450
                   12.00        136.69        0.0450
                   16.00        136.55        0.0450
                   36.00        135.52        0.0350      Main Channel
                   64.00        136.21        0.0450
                   75.00        136.49        0.0450
                   84.00        137.21        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  135.61    .491E+02        0.1         0.26      12.99
        0.18  135.70    .196E+03        0.4         0.42       8.18
        0.27  135.79    .442E+03        1.2         0.55       6.24
        0.36  135.88    .785E+03        2.5         0.66       5.15
        0.45  135.97    .123E+04        4.6         0.77       4.44
        0.53  136.06    .177E+04        7.5         0.87       3.93
        0.62  136.15    .240E+04       11.3         0.96       3.55
        0.71  136.24    .314E+04       16.4         1.07       3.19
        0.80  136.32    .397E+04       23.3         1.20       2.84
        0.89  136.41    .490E+04       31.4         1.32       2.60
        0.98  136.50    .592E+04       40.8         1.42       2.41
        1.07  136.59    .701E+04       51.5         1.51       2.27
        1.16  136.68    .816E+04       63.4         1.59       2.14
        1.25  136.77    .938E+04       76.6         1.67       2.04
        1.34  136.86    .107E+05       91.2         1.75       1.95
        1.42  136.95    .120E+05      107.3         1.83       1.87
        1.51  137.04    .135E+05      125.8         1.91       1.78
        1.60  137.13    .149E+05      145.6         2.00       1.71
        1.69  137.22    .164E+05      166.8         2.08       1.64

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50300)  352.30    40.07    6.33  76.44      0.97      1.41
    OUTFLOW: ID= 1 ( 60300)  352.30    39.97    6.33  76.44      0.97      1.41


---------------------
| CALIB             |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
---------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.77         6.39
      Dep. Storage     (mm)=       2.00         8.38
      Average Slope     (%)=       3.20         3.20
      Length            (m)=     247.21        43.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=     135.12       106.64
                    over (min)       5.00        15.00
      Storage Coeff.  (min)=       3.00 (ii)   10.63 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.28         0.09
                                                          *TOTALS*
```

```
      PEAK FLOW       (cms)=       0.81         1.27          1.933 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
      RUNOFF VOLUME    (mm)=     100.36        58.48          68.33
      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
      RUNOFF COEFFICIENT   =       0.98         0.57           0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17   1.933     6.08    68.33
      + ID2= 2 ( 60300):   352.30  39.965     6.33    76.44
        ================================================
        ID = 3 ( 50340):   361.46  40.912     6.33    76.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   539.28  21.231     6.25    50.44
      + ID2= 2 ( 50340):   361.46  40.912     6.33    76.23
        ================================================
        ID = 3 ( 50350):   900.75  61.737     6.33    60.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         134.05        0.0450
                 24.00         133.67        0.0450
                 30.00         131.85        0.0450
                 36.00         131.42        0.0450
                 42.00         130.48        0.0450
                 48.00         130.42        0.0350      Main Channel
                 54.00         130.42        0.0350      Main Channel
                 60.00         130.62        0.0450
                 66.00         130.77        0.0450
                 72.00         131.03        0.0450
                 78.00         131.43        0.0450
                 84.00         131.38        0.0450
                 90.00         131.33        0.0450
                 96.00         131.98        0.0450
                102.00         133.31        0.0450
                120.00         133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   130.42    .133E+02        0.0         0.03     768.63
        0.19   130.61    .383E+04        1.6         0.61      40.07
        0.37   130.79    .994E+04        6.6         0.97      25.18
        0.56   130.98    .179E+05       15.1         1.23      19.81
        0.75   131.16    .272E+05       27.2         1.46      16.72
        0.93   131.35    .377E+05       42.2         1.64      14.88
        1.12   131.54    .521E+05       60.9         1.71      14.26
        1.30   131.72    .683E+05       87.2         1.86      13.07
        1.49   131.91    .857E+05      119.1         2.03      11.99
        1.68   132.09    .104E+06      157.8         2.22      10.96
        1.86   132.28    .122E+06      201.6         2.41      10.11
        2.05   132.47    .141E+06      250.1         2.59       9.41
        2.23   132.65    .160E+06      303.1         2.76       8.82
        2.42   132.84    .180E+06      360.6         2.93       8.32
        2.61   133.02    .200E+06      422.5         3.08       7.90
        2.79   133.21    .221E+06      488.7         3.24       7.53
        2.98   133.40    .242E+06      552.2         3.34       7.29
        3.16   133.58    .264E+06      613.6         3.40       7.17
        3.35   133.77    .288E+06      658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50350)  900.75    61.74    6.33  60.79      1.12      1.71
   OUTFLOW: ID= 1 ( 60350)  900.75    53.25    6.50  60.78      1.04      1.68


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.03   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.186 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.073
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.367 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.096
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

     Unit Hyd Qpeak  (cms)=   0.340

     PEAK FLOW       (cms)=   0.415 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  67.110
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.67   0.415     6.25    67.11
      + ID2= 2 (******):     2.22   0.367     6.17    67.10
        ================================================

        ID = 3 (******):     4.89   0.779     6.25    67.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):     4.89      0.78      6.25    67.10
     ================================================
     ID= 2  (   2)    :     2.44      0.39      6.25    67.10
     ID= 3  (   2)    :     2.44      0.39      6.25    67.10
     ID= 4  (   2)    :     0.00      0.00      0.00     0.00
     ID= 5  (   2)    :     0.00      0.00      0.00     0.00
     ID= 6  (   2)    :     0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.186     6.17    67.07
      + ID2= 2 (******):     2.44   0.389     6.25    67.10
        ================================================
        ID = 3 (******):     3.48   0.570     6.17    67.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.15   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.480

     PEAK FLOW       (cms)=   0.605 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  67.118
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.064 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.631
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.651

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.15   0.605     6.25    67.12
      + ID2= 2 (******):     0.26   0.064     6.08    66.63
        ================================================
        ID = 3 (******):     4.41   0.642     6.25    67.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.41   0.642     6.25    67.09
      + ID2= 2 (******):     3.48   0.570     6.17    67.09
        ================================================
        ID = 1 (******):     7.89   1.207     6.25    67.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.78   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.199

     PEAK FLOW       (cms)=   0.183 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.748
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.652

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.14   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

     Unit Hyd Qpeak  (cms)=   0.292

     PEAK FLOW       (cms)=   0.345 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  67.101
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.67   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.122

     PEAK FLOW       (cms)=   0.131 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.029
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.47   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33
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02449>
02450>      Unit Hyd Qpeak  (cms)=   0.170
02451>
02452>      PEAK FLOW       (cms)=   0.214 (i)
02453>      TIME TO PEAK    (hrs)=   6.250
02454>      RUNOFF VOLUME    (mm)=  67.118
02455>      TOTAL RAINFALL   (mm)= 102.360
02456>      RUNOFF COEFFICIENT   =   0.656
02457>
02458>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02459>
02460> ------------------------------------------------------------------------------
02461>
02462> --------------------
02463> | ADD HYD  (******)|
02464> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02465> --------------------         (ha)    (cms)    (hrs)     (mm)
02466>         ID1= 1 (******):     0.67   0.131     6.17    67.03
02467>       + ID2= 2 (******):     2.14   0.345     6.25    67.10
02468>         ================================================
02469>         ID = 3 (******):     2.81   0.474     6.17    67.08
02470>
02471>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02472> ------------------------------------------------------------------------------
02473>
02474> --------------------
02475> | ADD HYD  (******)|
02476> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
02477> --------------------         (ha)    (cms)    (hrs)     (mm)
02478>         ID1= 3 (******):     2.81   0.474     6.17    67.08
02479>       + ID2= 2 (******):     0.78   0.183     6.08    66.75
02480>         ================================================
02481>         ID = 1 (******):     3.59   0.637     6.17    67.01
02482>
02483>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02484> ------------------------------------------------------------------------------
02485>
02486> --------------------
02487> | ADD HYD  (******)|
02488> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02489> --------------------         (ha)    (cms)    (hrs)     (mm)
02490>         ID1= 1 (******):     3.59   0.637     6.17    67.01
02491>       + ID2= 2 (******):     1.47   0.214     6.25    67.12
02492>         ================================================
02493>         ID = 3 (******):     5.06   0.838     6.17    67.04
02494>
02495>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02496> ------------------------------------------------------------------------------
02497>
02498> --------------------
02499> | ADD HYD  ( 50360)|
02500> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02501> --------------------         (ha)    (cms)    (hrs)     (mm)
02502>         ID1= 1 (******):     7.89   1.207     6.25    67.09
02503>       + ID2= 2 (******):     5.06   0.838     6.17    67.04
02504>         ================================================
02505>         ID = 3 ( 50360):    12.95   2.030     6.17    67.07
02506>
02507>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02508> ------------------------------------------------------------------------------
02509>
02510> --------------------
02511> | ADD HYD  ( 50360)|
02512> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
02513> --------------------         (ha)    (cms)    (hrs)     (mm)
02514>         ID1= 3 ( 50360):    12.95   2.030     6.17    67.07
02515>       + ID2= 2 ( 60350):   900.75  53.247     6.50    60.78
02516>         ================================================
02517>         ID = 1 ( 50360):   913.69  54.602     6.50    60.87
02518>
02519>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02520> ------------------------------------------------------------------------------
02521> --------------------
02522> | ROUTE CHN( 60390)|
02523> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
02524> --------------------
02525>                <------ DATA FOR SECTION (   1.1) ------>
02526>                Distance      Elevation       Manning
02527>                    0.00        127.30        0.0450
02528>                    6.00        127.39        0.0450
02529>                   12.00        127.46        0.0450
02530>                   18.00        126.87        0.0450
02531>                   24.00        125.30        0.0450
02532>                   30.00        123.90        0.0450
02533>                   36.00        123.14        0.0450
02534>                   42.00        123.07        0.0450
02535>                   48.00        122.88        0.0450
02536>                   54.00        122.90        0.0450
02537>                   60.00        122.95        0.0450
02538>                   66.00        123.04        0.0450
02539>                   72.00        123.15        0.0350      Main Channel
02540>                   78.00        122.98        0.0450
02541>                   84.00        122.97        0.0450
02542>                   90.00        122.96        0.0450
02543>                   96.00        122.92        0.0450
02544>                  102.00        123.50        0.0450
02545>                  108.00        124.18        0.0450
02546>                  120.00        127.45        0.0450
02547>
02548>       <---------------------- TRAVEL TIME TABLE ---------------------->
02549>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
02550>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
02551>         0.09   122.98    .246E+03       0.4         0.31      10.02
02552>         0.33   123.21    .251E+04      11.8         0.86       3.57
02553>         0.56   123.45    .538E+04      39.9         1.37       2.25
02554>         0.80   123.68    .842E+04      81.1         1.78       1.73
02555>         1.04   123.92    .116E+05     134.5         2.13       1.44
02556>         1.27   124.16    .150E+05     200.0         2.46       1.25
02557>         1.51   124.39    .185E+05     278.3         2.78       1.11
02558>         1.74   124.63    .220E+05     367.4         3.08       1.00
02559>         1.98   124.86    .257E+05     466.7         3.35       0.92
02560>         2.22   125.10    .294E+05     576.1         3.61       0.85
02561>         2.45   125.34    .332E+05     695.4         3.86       0.80
02562>         2.69   125.57    .371E+05     824.8         4.10       0.75
02563>         2.92   125.81    .410E+05     963.8         4.33       0.71
02564>         3.16   126.04    .451E+05    1112.3         4.55       0.68
02565>         3.39   126.28    .492E+05    1270.1         4.76       0.65
02566>         3.63   126.51    .534E+05    1437.3         4.97       0.62
02567>         3.87   126.75    .576E+05    1613.7         5.16       0.60
02568>         4.10   126.99    .620E+05    1791.1         5.33       0.58
02569>         4.34   127.22    .665E+05    1970.4         5.47       0.56
02570>
02571>                                    <---- hydrograph ---->   <-pipe / channel->
02572>                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
02573>                               (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
02574>    INFLOW : ID= 2 ( 50360)  913.69    54.60     6.50  60.87      0.65      1.49
02575>    OUTFLOW: ID= 1 ( 60390)  913.69    54.59     6.50  60.87      0.65      1.49
02576>
02577>
02578>
02579> ------------------------------------------------------------------------------
02580> --------------------
02581> | CALIB            |
02582> | NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 85.0
02583> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
02584> --------------------   U.H. Tp(hrs)=   0.20
02585>
02586>      Unit Hyd Qpeak  (cms)=   3.925
02587>
02588>      PEAK FLOW       (cms)=   3.970 (i)
02589>      TIME TO PEAK    (hrs)=   6.167
02590>      RUNOFF VOLUME    (mm)=  63.430
02591>      TOTAL RAINFALL   (mm)= 102.360
02592>      RUNOFF COEFFICIENT   =   0.620
02593>
02594>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02595>
02596> ------------------------------------------------------------------------------
02597>
02598> --------------------
02599> | ADD HYD  ( 50390)|
02600> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02601> --------------------         (ha)    (cms)    (hrs)     (mm)
02602>         ID1= 1 ( 40390):    20.55   3.970     6.17    63.43
02603>       + ID2= 2 ( 60390):   913.69  54.593     6.50    60.87
02604>         ================================================
02605>         ID = 3 ( 50390):   934.24  56.175     6.50    60.93
02606>
02607>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02608> ------------------------------------------------------------------------------
02609> --------------------
02610> | CALIB            |
02611> | STANDHYD ( 40370)|   Area     (ha)=  17.93
02612> |ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
02613> --------------------
02614>                                IMPERVIOUS    PERVIOUS (i)
02615>      Surface Area     (ha)=      11.83         6.10
02616>      Dep. Storage     (mm)=       2.00         6.08
02617>      Average Slope     (%)=       1.50         1.50
02618>      Length            (m)=     345.74        42.00
02619>      Mannings n            =      0.015        0.280
02620>
02621>      Max.Eff.Inten.(mm/hr)=     135.12       153.48
02622>                over (min)        5.00        15.00
02623>      Storage Coeff.  (min)=       4.60 (ii)   11.74 (ii)
02624>      Unit Hyd. Tpeak (min)=       5.00        15.00
02625>      Unit Hyd. peak  (cms)=       0.23         0.09
02626>                                                          *TOTALS*
02627>      PEAK FLOW       (cms)=       3.43         1.72        4.978 (iii)
02628>      TIME TO PEAK    (hrs)=       6.08         6.17         6.08
02629>      RUNOFF VOLUME    (mm)=     100.36        68.28        85.07
02630>      TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
02631>      RUNOFF COEFFICIENT   =       0.98         0.67         0.83
02632>
02633> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
02634>
02635>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
02636>            CN*  =  80.9    Ia = Dep. Storage  (Above)
02637>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
02638>            THAN THE STORAGE COEFFICIENT.
02639>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02640>
02641> ------------------------------------------------------------------------------
02642> --------------------
02643> | ROUTE CHN( 60370)|
02644> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
02645> --------------------
02646>                <------ DATA FOR SECTION (   1.1) ------>
02647>                Distance      Elevation       Manning
02648>                    0.00        127.70        0.0450
02649>                   18.00        126.87        0.0450
02650>                   24.00        125.30        0.0450
02651>                   30.00        123.90        0.0450
02652>                   36.00        123.14        0.0450
02653>                   42.00        123.07        0.0450
02654>                   48.00        122.88        0.0450
02655>                   54.00        122.90        0.0450
02656>                   60.00        122.95        0.0450
02657>                   66.00        123.04    0.0450 /0.0350  Main Channel
02658>                   72.00        122.86        0.0350      Main Channel
02659>                   78.00        122.98        0.0450
02660>                   84.00        122.97        0.0450
02661>                   90.00        122.96        0.0450
02662>                   96.00        122.92        0.0450
02663>                  102.00        123.50        0.0450
02664>                  108.00        124.18        0.0450
02665>                  120.00        127.45        0.0450
02666>
02667>       <---------------------- TRAVEL TIME TABLE ---------------------->
02668>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
02669>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
02670>         0.12   122.98    .275E+03       0.7         0.35       6.78
02671>         0.36   123.21    .218E+04      14.7         0.95       2.47
02672>         0.59   123.45    .437E+04      44.6         1.44       1.63
02673>         0.83   123.68    .670E+04      87.2         1.84       1.28
02674>         1.06   123.92    .916E+04     141.6         2.19       1.08
02675>         1.30   124.16    .117E+05     208.1         2.51       0.94
02676>         1.54   124.39    .144E+05     287.0         2.82       0.84
02677>         1.77   124.63    .171E+05     376.7         3.11       0.76
02678>         2.01   124.86    .199E+05     476.5         3.38       0.70
02679>         2.24   125.10    .228E+05     586.1         3.64       0.65
02680>         2.48   125.33    .257E+05     705.6         3.88       0.61
02681>         2.71   125.57    .287E+05     835.1         4.12       0.57
02682>         2.95   125.80    .317E+05     974.0         4.35       0.54
02683>         3.19   126.04    .348E+05    1122.3         4.56       0.52
02684>         3.42   126.28    .379E+05    1279.8         4.77       0.49
02685>         3.66   126.51    .411E+05    1446.6         4.97       0.47
02686>         3.89   126.75    .444E+05    1622.6         5.17       0.46
02687>         4.13   126.98    .477E+05    1786.6         5.29       0.45
02688>         4.36   127.22    .513E+05    1942.9         5.36       0.44
02689>
02690>                                    <---- hydrograph ---->   <-pipe / channel->
02691>                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
02692>                               (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
02693>    INFLOW : ID= 2 ( 40370)   17.93     4.98     6.08  85.07      0.19      0.43
02694>    OUTFLOW: ID= 1 ( 60370)   17.93     4.20     6.08  85.07      0.18      0.41
02695>
02696>
02697>
02698> ------------------------------------------------------------------------------
02699>
02700> --------------------
02701> | ADD HYD  ( 50400)|
02702> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02703> --------------------         (ha)    (cms)    (hrs)     (mm)
02704>         ID1= 1 ( 50390):   934.24  56.175     6.50    60.93
02705>       + ID2= 2 ( 60370):    17.93   4.198     6.08    85.07
02706>         ================================================
02707>         ID = 3 ( 50400):   952.17  57.737     6.50    61.38
02708>
02709>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02710> ------------------------------------------------------------------------------
02711> --------------------
02712> | ROUTE CHN( 60400)|
02713> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
02714> --------------------
02715>                <------ DATA FOR SECTION (   1.1) ------>
02716>                Distance      Elevation       Manning
02717>                    0.00        125.01        0.0450
02718>                   20.00        123.70        0.0450
02719>                   25.00        123.04        0.0450
02720>                   30.00        120.84        0.0450
02721>                   35.00        119.81    0.0450 /0.0350  Main Channel
02722>                   40.00        119.74        0.0350      Main Channel
02723>                   65.00        120.12        0.0450
02724>                   90.00        120.58        0.0450
02725>                  100.00        125.02        0.0450
02726>
02727>       <---------------------- TRAVEL TIME TABLE ---------------------->
02728>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
02729>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
02730>         0.07   119.81    .209E+03       0.1         0.27      34.81
02731>         0.35   120.09    .326E+04       4.7         0.83      11.50
02732>         0.62   120.36    .916E+04      21.3         1.34       7.16
02733>         0.90   120.63    .176E+05      51.5         1.68       5.69
02734>         1.17   120.91    .270E+05      96.6         2.05       4.67
02735>         1.44   121.18    .367E+05     153.8         2.41       3.98
02736>         1.72   121.46    .466E+05     222.1         2.74       3.50
02737>         1.99   121.73    .567E+05     300.7         3.05       3.14
02738>         2.26   122.00    .669E+05     389.1         3.34       2.87
02739>         2.54   122.28    .774E+05     487.1         3.62       2.65
02740>         2.81   122.55    .880E+05     594.2         3.88       2.47
02741>         3.09   122.82    .988E+05     710.4         4.13       2.32
02742>         3.36   123.10    .110E+06     834.4         4.36       2.20
02743>         3.63   123.37    .121E+06     964.4         4.57       2.10
02744>         3.91   123.65    .133E+06    1104.4         4.76       2.01
02745>         4.18   123.92    .145E+06    1250.0         4.93       1.94
02746>         4.45   124.19    .159E+06    1406.7         5.09       1.88
02747>         4.73   124.47    .172E+06    1575.5         5.25       1.82
02748>         5.00   124.74    .187E+06    1756.1         5.39       1.77
02749>
02750>                                    <---- hydrograph ---->   <-pipe / channel->
02751>                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
02752>                               (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
02753>    INFLOW : ID= 2 ( 50400)  952.17    57.74     6.50  61.38      0.93      1.72
02754>    OUTFLOW: ID= 1 ( 60400)  952.17    57.05     6.58  61.38      0.93      1.72
```

```
02755>
02756>
02757>
02758> --------------------------------------------------------------------------------
02759> --------------------
02760> | CALIB            |
02761> | STANDHYD ( 40410)|   Area    (ha)=   7.92
02762> |ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
02763> --------------------
02764>                              IMPERVIOUS    PERVIOUS (i)
02765>      Surface Area     (ha)=       2.26         5.65
02766>      Dep. Storage     (mm)=       2.00         9.48
02767>      Average Slope     (%)=       1.10         1.10
02768>      Length            (m)=     229.75       574.00
02769>      Mannings n             =     0.015        0.350
02770>
02771>      Max.Eff.Inten.(mm/hr)=     135.12        35.56
02772>                   over (min)       5.00        85.00
02773>      Storage Coeff.  (min)=       3.95 (ii)   81.21 (ii)
02774>      Unit Hyd. Tpeak (min)=       5.00        85.00
02775>      Unit Hyd. peak  (cms)=       0.24         0.01
02776>                                                          *TOTALS*
02777>      PEAK FLOW       (cms)=       0.73         0.27          0.784 (iii)
02778>      TIME TO PEAK    (hrs)=       6.08         7.33           6.08
02779>      RUNOFF VOLUME    (mm)=     100.36        54.32          65.86
02780>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
02781>      RUNOFF COEFFICIENT   =       0.98         0.53           0.64
02782>
02783> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
02784>
02785>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
02786>              CN*  =  78.3    Ia = Dep. Storage  (Above)
02787>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
02788>            THAN THE STORAGE COEFFICIENT.
02789>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02790>
02791> --------------------------------------------------------------------------------
02792>
02793> --------------------
02794> | ADD HYD  ( 50410)|
02795> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02796> --------------------         (ha)    (cms)    (hrs)     (mm)
02797>        ID1= 1 ( 40410):     7.92   0.784     6.08    65.86
02798>      + ID2= 2 ( 60400):   952.17  57.053     6.58    61.38
02799>        ====================================================
02800>        ID = 3 ( 50410):   960.09  57.295     6.58    61.42
02801>
02802>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02803> --------------------------------------------------------------------------------
02804> --------------------
02805> | CALIB            |
02806> | NASHYD   (******)|   Area    (ha)=   1.92   Curve Number   (CN)= 85.0
02807> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02808> --------------------   U.H. Tp(hrs)=   0.23
02809>
02810>      Unit Hyd Qpeak  (cms)=   0.319
02811>
02812>      PEAK FLOW       (cms)=   0.356 (i)
02813>      TIME TO PEAK    (hrs)=   6.167
02814>      RUNOFF VOLUME    (mm)=  67.061
02815>      TOTAL RAINFALL   (mm)= 102.360
02816>      RUNOFF COEFFICIENT   =   0.655
02817>
02818>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02819>
02820> --------------------------------------------------------------------------------
02821> --------------------
02822> | CALIB            |
02823> | NASHYD   (******)|   Area    (ha)=   0.54   Curve Number   (CN)= 85.0
02824> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02825> --------------------   U.H. Tp(hrs)=   0.20
02826>
02827>      Unit Hyd Qpeak  (cms)=   0.103
02828>
02829>      PEAK FLOW       (cms)=   0.108 (i)
02830>      TIME TO PEAK    (hrs)=   6.167
02831>      RUNOFF VOLUME    (mm)=  67.007
02832>      TOTAL RAINFALL   (mm)= 102.360
02833>      RUNOFF COEFFICIENT   =   0.655
02834>
02835>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02836>
02837> --------------------------------------------------------------------------------
02838> --------------------
02839> | CALIB            |
02840> | NASHYD   (******)|   Area    (ha)=   1.01   Curve Number   (CN)= 85.0
02841> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02842> --------------------   U.H. Tp(hrs)=   0.22
02843>
02844>      Unit Hyd Qpeak  (cms)=   0.175
02845>
02846>      PEAK FLOW       (cms)=   0.192 (i)
02847>      TIME TO PEAK    (hrs)=   6.167
02848>      RUNOFF VOLUME    (mm)=  67.047
02849>      TOTAL RAINFALL   (mm)= 102.360
02850>      RUNOFF COEFFICIENT   =   0.655
02851>
02852>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02853>
02854> --------------------------------------------------------------------------------
02855> --------------------
02856> | CALIB            |
02857> | NASHYD   (******)|   Area    (ha)=   6.75   Curve Number   (CN)= 85.0
02858> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02859> --------------------   U.H. Tp(hrs)=   0.37
02860>
02861>      Unit Hyd Qpeak  (cms)=   0.697
02862>
02863>      PEAK FLOW       (cms)=   0.906 (i)
02864>      TIME TO PEAK    (hrs)=   6.333
02865>      RUNOFF VOLUME    (mm)=  67.124
02866>      TOTAL RAINFALL   (mm)= 102.360
02867>      RUNOFF COEFFICIENT   =   0.656
02868>
02869>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02870>
02871> --------------------------------------------------------------------------------
02872>
02873> --------------------
02874> | ADD HYD  (******)|
02875> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02876> --------------------         (ha)    (cms)    (hrs)     (mm)
02877>        ID1= 1 (******):     6.75   0.906     6.33    67.12
02878>      + ID2= 2 (******):     1.01   0.192     6.17    67.05
02879>        ====================================================
02880>        ID = 3 (******):     7.76   1.070     6.25    67.11
02881>
02882>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02883> --------------------------------------------------------------------------------
02884> --------------------
02885> | CALIB            |
02886> | NASHYD   (******)|   Area    (ha)=   2.16   Curve Number   (CN)= 85.0
02887> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02888> --------------------   U.H. Tp(hrs)=   0.26
02889>
02890>      Unit Hyd Qpeak  (cms)=   0.317
02891>
02892>      PEAK FLOW       (cms)=   0.368 (i)
02893>      TIME TO PEAK    (hrs)=   6.167
02894>      RUNOFF VOLUME    (mm)=  67.090
02895>      TOTAL RAINFALL   (mm)= 102.360
02896>      RUNOFF COEFFICIENT   =   0.655
02897>
02898>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02899>
02900> --------------------------------------------------------------------------------
02901> --------------------
02902> | CALIB            |
02903> | NASHYD   (******)|   Area    (ha)=   1.24   Curve Number   (CN)= 85.0
02904> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02905> --------------------   U.H. Tp(hrs)=   0.28
02906>
02907>      Unit Hyd Qpeak  (cms)=   0.169
02908>
02909>      PEAK FLOW       (cms)=   0.200 (i)
02910>      TIME TO PEAK    (hrs)=   6.250
02911>      RUNOFF VOLUME    (mm)=  67.101
02912>      TOTAL RAINFALL   (mm)= 102.360
02913>      RUNOFF COEFFICIENT   =   0.656
02914>
02915>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02916>
02917> --------------------------------------------------------------------------------
02918>
02919> --------------------
02920> | ADD HYD  (******)|
02921> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02922> --------------------         (ha)    (cms)    (hrs)     (mm)
02923>        ID1= 1 (******):     1.24   0.200     6.25    67.10
02924>      + ID2= 2 (******):     2.16   0.368     6.17    67.09
02925>        ====================================================
02926>        ID = 3 (******):     3.40   0.567     6.17    67.09
02927>
02928>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02929> --------------------------------------------------------------------------------
02930>
02931> --------------------
02932> | ADD HYD  (******)|
02933> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
02934> --------------------         (ha)    (cms)    (hrs)     (mm)
02935>        ID1= 3 (******):     3.40   0.567     6.17    67.09
02936>      + ID2= 2 (******):     7.76   1.070     6.25    67.11
02937>        ====================================================
02938>        ID = 1 (******):    11.16   1.629     6.25    67.11
02939>
02940>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02941> --------------------------------------------------------------------------------
02942> --------------------
02943> | CALIB            |
02944> | NASHYD   (******)|   Area    (ha)=   2.68   Curve Number   (CN)= 85.0
02945> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02946> --------------------   U.H. Tp(hrs)=   0.30
02947>
02948>      Unit Hyd Qpeak  (cms)=   0.341
02949>
02950>      PEAK FLOW       (cms)=   0.417 (i)
02951>      TIME TO PEAK    (hrs)=   6.250
02952>      RUNOFF VOLUME    (mm)=  67.110
02953>      TOTAL RAINFALL   (mm)= 102.360
02954>      RUNOFF COEFFICIENT   =   0.656
02955>
02956>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02957>
02958> --------------------------------------------------------------------------------
02959> --------------------
02960> | CALIB            |
02961> | NASHYD   (******)|   Area    (ha)=   0.71   Curve Number   (CN)= 85.0
02962> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02963> --------------------   U.H. Tp(hrs)=   0.20
02964>
02965>      Unit Hyd Qpeak  (cms)=   0.136
02966>
02967>      PEAK FLOW       (cms)=   0.142 (i)
02968>      TIME TO PEAK    (hrs)=   6.167
02969>      RUNOFF VOLUME    (mm)=  67.007
02970>      TOTAL RAINFALL   (mm)= 102.360
02971>      RUNOFF COEFFICIENT   =   0.655
02972>
02973>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02974>
02975> --------------------------------------------------------------------------------
02976> --------------------
02977> | CALIB            |
02978> | NASHYD   (******)|   Area    (ha)=   0.61   Curve Number   (CN)= 85.0
02979> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
02980> --------------------   U.H. Tp(hrs)=   0.18
02981>
02982>      Unit Hyd Qpeak  (cms)=   0.129
02983>
02984>      PEAK FLOW       (cms)=   0.127 (i)
02985>      TIME TO PEAK    (hrs)=   6.083
02986>      RUNOFF VOLUME    (mm)=  66.943
02987>      TOTAL RAINFALL   (mm)= 102.360
02988>      RUNOFF COEFFICIENT   =   0.654
02989>
02990>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02991>
02992> --------------------------------------------------------------------------------
02993>
02994> --------------------
02995> | ADD HYD  (******)|
02996> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02997> --------------------         (ha)    (cms)    (hrs)     (mm)
02998>        ID1= 1 (******):     0.61   0.127     6.08    66.94
02999>      + ID2= 2 (******):     2.44   0.389     6.25    67.10
03000>        ====================================================
03001>        ID = 3 (******):     3.06   0.510     6.17    67.07
03002>
03003>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03004> --------------------------------------------------------------------------------
03005> --------------------
03006> | CALIB            |
03007> | NASHYD   (******)|   Area    (ha)=   0.95   Curve Number   (CN)= 85.0
03008> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
03009> --------------------   U.H. Tp(hrs)=   0.23
03010>
03011>      Unit Hyd Qpeak  (cms)=   0.158
03012>
03013>      PEAK FLOW       (cms)=   0.176 (i)
03014>      TIME TO PEAK    (hrs)=   6.167
03015>      RUNOFF VOLUME    (mm)=  67.061
03016>      TOTAL RAINFALL   (mm)= 102.360
03017>      RUNOFF COEFFICIENT   =   0.655
03018>
03019>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03020>
03021> --------------------------------------------------------------------------------
03022> --------------------
03023> | CALIB            |
03024> | NASHYD   (******)|   Area    (ha)=   1.28   Curve Number   (CN)= 85.0
03025> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
03026> --------------------   U.H. Tp(hrs)=   0.25
03027>
03028>      Unit Hyd Qpeak  (cms)=   0.196
03029>
03030>      PEAK FLOW       (cms)=   0.225 (i)
03031>      TIME TO PEAK    (hrs)=   6.167
03032>      RUNOFF VOLUME    (mm)=  67.082
03033>      TOTAL RAINFALL   (mm)= 102.360
03034>      RUNOFF COEFFICIENT   =   0.655
03035>
03036>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03037>
03038> --------------------------------------------------------------------------------
03039>
03040> --------------------
03041> | ADD HYD  (******)|
03042> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03043> --------------------         (ha)    (cms)    (hrs)     (mm)
03044>        ID1= 1 (******):     1.28   0.225     6.17    67.08
03045>      + ID2= 2 (******):     0.95   0.176     6.17    67.06
03046>        ====================================================
03047>        ID = 3 (******):     2.23   0.401     6.17    67.07
03048>
03049>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03050> --------------------------------------------------------------------------------
03051>
03052> --------------------
03053> | ADD HYD  (******)|
03054> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
03055> --------------------         (ha)    (cms)    (hrs)     (mm)
03056>        ID1= 3 (******):     2.23   0.401     6.17    67.07
03057>      + ID2= 2 (******):     0.71   0.142     6.17    67.01
03058>        ====================================================
03059>        ID = 1 (******):     2.94   0.542     6.17    67.06
03060>
```

```
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.94   0.542     6.17    67.06
      + ID2= 2 (******):     1.92   0.356     6.17    67.06
        ====================================================
        ID = 3 (******):     4.86   0.899     6.17    67.06

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.86   0.899     6.17    67.06
      + ID2= 2 (******):     0.54   0.108     6.17    67.01
        ====================================================
        ID = 1 (******):     5.40   1.006     6.17    67.05

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.40   1.006     6.17    67.05
      + ID2= 2 (******):     2.68   0.417     6.25    67.11
        ====================================================
        ID = 3 (******):     8.08   1.410     6.17    67.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     8.08   1.410     6.17    67.07
      + ID2= 2 (******):     3.06   0.510     6.17    67.07
        ====================================================
        ID = 1 (******):    11.13   1.920     6.17    67.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   1.920     6.17    67.07
      + ID2= 2 (******):    11.16   1.629     6.25    67.11
        ====================================================
        ID = 3 (******):    22.30   3.490     6.17    67.09

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.197

      PEAK FLOW       (cms)=   0.224 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  67.073
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.655

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.174

      PEAK FLOW       (cms)=   0.195 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  67.061
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.655

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  18.31   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.457

      PEAK FLOW       (cms)=   2.049 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  67.132
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.656

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   1.920     6.17    67.07
      + ID2= 2 (******):    18.31   2.049     6.42    67.13
        ====================================================
        ID = 3 (******):    19.36   2.170     6.42    67.13

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    19.36   2.170     6.42    67.13
      + ID2= 2 (******):     1.24   0.224     6.17    67.07
        ====================================================
        ID = 1 (******):    20.60   2.328     6.33    67.12

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    22.30   3.490     6.17    67.09
      + ID2= 2 (******):    20.60   2.328     6.33    67.12
        ====================================================
        ID = 3 (******):    42.90   5.691     6.25    67.11

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area     (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00

--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.95        46.62
      Dep. Storage     (mm)=       2.00         7.70
      Average Slope     (%)=       1.90         1.90
      Length            (m)=     671.17        89.00
      Mannings n           =      0.015        0.240

      Max.Eff.Inten.(mm/hr)=     135.12       103.69
                    over (min)       5.00        20.00
      Storage Coeff.  (min)=       6.38 (ii)   17.52 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.94         7.34      11.206 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.25        6.08
      RUNOFF VOLUME    (mm)=     100.36        60.48       70.45
      TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
      RUNOFF COEFFICIENT   =       0.98         0.59        0.69

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):    67.57  11.206     6.08    70.45
      + ID2= 2 (******):    42.90   5.691     6.25    67.11
        ====================================================
        ID = 3 (******):   110.47  15.789     6.08    69.15

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):   960.09  57.295     6.58    61.42
      + ID2= 2 (******):   110.47  15.789     6.08    69.15
        ====================================================
        ID = 3 ( 50420):  1070.56  67.183     6.50    62.22

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         121.79         0.0450
                 12.00         116.08         0.0450
                 40.00         115.59    0.0450 /0.0350  Main Channel
                 44.00         114.89         0.0350      Main Channel
                 48.00         114.52         0.0350      Main Channel
                 52.00         115.72    0.0350 /0.0450  Main Channel
                 56.00         115.93         0.0450
                 60.00         117.24         0.0450
                 64.00         119.04         0.0450
                 68.00         120.69         0.0450
                 72.00         121.01         0.0450
                 74.00         121.49         0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.36  114.88    .645E+03        0.7         0.83      14.38
         0.71  115.23    .236E+04        4.6         1.41       8.47
         1.07  115.59    .489E+04       12.6         1.84       6.48
         1.44  115.96    .112E+05       30.9         1.97       6.04
         1.80  116.33    .227E+05       69.1         2.17       5.49
         2.17  116.70    .351E+05      125.6         2.56       4.65
         2.54  117.06    .479E+05      197.5         2.95       4.04
         2.91  117.43    .612E+05      283.9         3.32       3.59
         3.28  117.80    .749E+05      384.1         3.66       3.25
         3.65  118.17    .891E+05      497.4         3.99       2.99
         4.02  118.54    .104E+06      623.5         4.30       2.77
         4.39  118.91    .119E+06      762.2         4.59       2.60
         4.76  119.28    .134E+06      913.1         4.87       2.45
         5.13  119.65    .150E+06     1076.2         5.13       2.32
         5.49  120.02    .166E+06     1251.7         5.38       2.21
         5.86  120.39    .183E+06     1439.5         5.62       2.12
         6.23  120.75    .200E+06     1634.3         5.84       2.04
         6.60  121.12    .219E+06     1831.3         5.99       1.99
         6.97  121.49    .238E+06     2058.5         6.20       1.92

                                     <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420) 1070.56    67.18    6.50  62.22      1.79      2.16
   OUTFLOW: ID= 1 ( 60420) 1070.56    66.25    6.58  62.22      1.78      2.16


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area     (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.41        11.03
      Dep. Storage     (mm)=       2.00         7.80
      Average Slope     (%)=       3.50         3.50
      Length            (m)=     465.00       102.00
      Mannings n           =      0.015        0.320

      Max.Eff.Inten.(mm/hr)=     135.12        95.60
                    over (min)       5.00        20.00
      Storage Coeff.  (min)=       4.26 (ii)   16.62 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.23         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       7.64         1.63       8.807 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.25        6.08
      RUNOFF VOLUME    (mm)=     100.36        57.25       84.84
      TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
      RUNOFF COEFFICIENT   =       0.98         0.56        0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.3    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   8.807     6.08    84.84
      + ID2= 2 ( 60420):  1070.56  66.252     6.58    62.22
        ====================================================
        ID = 3 ( 50430):  1102.99  68.226     6.58    62.88

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
```

```
                Distance      Elevation       Manning
                    0.00         116.29        0.0450
                   20.00         114.05        0.0450
                   25.00         110.83        0.0450
                   30.00         109.36        0.0450
                   35.00         108.23    0.0450 /0.0350  Main Channel
                   40.00         107.52        0.0350      Main Channel
                   45.00         108.00    0.0350 /0.0450  Main Channel
                   50.00         107.84        0.0450
                   55.00         108.21        0.0450
                   60.00         108.95        0.0450
                   65.00         109.35        0.0450
                   70.00         109.41        0.0450
                   75.00         109.48        0.0450
                   80.00         109.77        0.0450
                   85.00         112.20        0.0450
                   90.00         115.48        0.0450
                  100.00         116.29        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24  107.76   .285E+03        0.4         0.74       12.74
        0.48  108.00   .146E+04        2.6         1.01        9.32
        0.97  108.49   .695E+04       23.3         1.90        4.97
        1.46  108.97   .141E+05       64.5         2.60        3.63
        1.94  109.46   .233E+05      116.9         2.84        3.33
        2.43  109.95   .371E+05      214.6         3.28        2.88
        2.92  110.44   .519E+05      350.2         3.83        2.47
        3.41  110.92   .675E+05      515.9         4.34        2.18
        3.89  111.41   .836E+05      711.3         4.82        1.96
        4.38  111.90   .100E+06      933.4         5.28        1.79
        4.87  112.39   .117E+06     1182.4         5.71        1.65
        5.35  112.87   .135E+06     1458.0         6.13        1.54
        5.84  113.36   .153E+06     1758.3         6.52        1.45
        6.33  113.85   .171E+06     2082.9         6.90        1.37
        6.82  114.34   .190E+06     2410.6         7.19        1.31
        7.30  114.82   .210E+06     2758.9         7.43        1.27
        7.79  115.31   .232E+06     3143.1         7.68        1.23
        8.28  115.80   .255E+06     3473.3         7.71        1.23
        8.77  116.29   .282E+06     3812.4         7.67        1.23

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430) 1102.99    68.23    6.58  62.88      1.49      2.62
   OUTFLOW: ID= 1 ( 60430) 1102.99    67.87    6.58  62.88      1.49      2.62
```

```
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70         19.42
     Dep. Storage     (mm)=       2.00          6.60
     Average Slope     (%)=       2.50          2.50
     Length            (m)=     617.06         45.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     135.12         86.98
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       5.59 (ii)    13.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.20          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=      13.31          2.79        15.730 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17         6.08
     RUNOFF VOLUME    (mm)=     100.36         51.03        83.09
     TOTAL RAINFALL   (mm)=     102.36        102.36       102.36
     RUNOFF COEFFICIENT   =       0.98          0.50         0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40440):    57.11  15.730     6.08    83.09
      + ID2= 2 ( 60430):  1102.99  67.874     6.58    62.88
        ================================================
        ID = 3 ( 50440):  1160.10  71.006     6.58    63.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         104.01        0.0450
                   10.00         103.90        0.0450
                   20.00         103.74        0.0450
                   30.00         103.66        0.0450
                   40.00         103.60        0.0450
                   50.00         102.52        0.0450
                   60.00         101.16        0.0450
                   70.00         100.60        0.0450
                   80.00         100.17        0.0450
                   90.00          99.85        0.0450
                  100.00          97.89        0.0350      Main Channel
                  110.00          97.62        0.0350      Main Channel
                  120.00          99.12        0.0450
                  130.00          99.16        0.0450
                  140.00          99.36        0.0450
                  150.00          99.66        0.0450
                  160.00          99.68        0.0450
                  180.00          99.76        0.0450
                  190.00         104.10        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.27   97.89   .102E+04        1.2         0.77       13.74
         0.60   98.21   .381E+04        9.4         1.56        6.74
         0.92   98.53   .738E+04       24.3         2.08        5.05
         1.24   98.86   .117E+05       46.2         2.50        4.22
         1.56   99.18   .171E+05       76.6         2.84        3.71
         1.89   99.50   .264E+05      124.5         2.98        3.53
         2.21   99.82   .403E+05      189.1         2.96        3.56
         2.53  100.15   .597E+05      286.1         3.03        3.48
         2.85  100.47   .809E+05      417.7         3.26        3.23
         3.17  100.79   .104E+06      580.2         3.53        2.98
         3.50  101.11   .128E+06      771.7         3.81        2.77
         3.82  101.44   .153E+06      996.3         4.10        2.57
         4.14  101.76   .179E+06     1248.4         4.40        2.40
         4.46  102.08   .206E+06     1526.4         4.68        2.25
         4.79  102.40   .233E+06     1829.8         4.96        2.13
         5.11  102.73   .261E+06     2156.4         5.22        2.02
         5.43  103.05   .290E+06     2507.0         5.47        1.93
         5.75  103.37   .319E+06     2882.7         5.71        1.85
         6.08  103.69   .350E+06     3194.7         5.77        1.83

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440) 1160.10    71.01    6.58  63.88      1.50      2.77
   OUTFLOW: ID= 1 ( 60440) 1160.10    70.54    6.67  63.88      1.49      2.76
```

```
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37         17.02
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       0.80          0.80
     Length            (m)=     450.16        150.00
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=     135.12         56.74
                   over (min)       5.00         40.00
     Storage Coeff.  (min)=       6.51 (ii)    35.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00         40.00
     Unit Hyd. peak  (cms)=       0.18          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.37          1.47         4.943 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.58         6.08
     RUNOFF VOLUME    (mm)=     100.36         54.70        73.42
     TOTAL RAINFALL   (mm)=     102.36        102.36       102.36
     RUNOFF COEFFICIENT   =       0.98          0.53         0.72

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40450):    30.40   4.943     6.08    73.42
      + ID2= 2 ( 60440):  1160.10  70.544     6.67    63.88
        ================================================
        ID = 3 ( 50450):  1190.50  72.457     6.67    64.12

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00          97.16        0.0450
                    3.00          96.00        0.0450
                    6.00          95.32        0.0450
                    9.00          94.64        0.0450
                   12.00          94.43        0.0450
                   15.00          94.29        0.0450
                   18.00          94.10        0.0350      Main Channel
                   21.00          94.02        0.0350      Main Channel
                   24.00          93.70        0.0350      Main Channel
                   27.00          94.22    0.0350 /0.0450  Main Channel
                   30.00          94.90        0.0450
                   32.00          95.30        0.0450
                   34.00          95.78        0.0450
                   36.00          96.25        0.0450
                   38.00          96.60        0.0450
                   48.00          97.14        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.13   93.83   .942E+02        0.1         0.39       30.45
         0.27   93.96   .377E+03        0.3         0.62       19.18
         0.40   94.09   .911E+03        0.9         0.69       17.28
         0.59   94.29   .230E+04        3.4         1.06       11.15
         0.78   94.48   .428E+04        7.9         1.32        8.98
         0.97   94.67   .679E+04       14.6         1.53        7.74
         1.16   94.86   .963E+04       23.7         1.75        6.77
         1.35   95.05   .127E+05       34.9         1.96        6.07
         1.54   95.24   .160E+05       48.1         2.14        5.54
         1.73   95.43   .196E+05       63.6         2.31        5.13
         1.92   95.62   .233E+05       81.2         2.48        4.79
         2.11   95.81   .273E+05      101.0         2.63        4.51
         2.30   96.00   .315E+05      123.0         2.78        4.27
         2.49   96.19   .360E+05      147.8         2.93        4.06
         2.68   96.38   .406E+05      174.6         3.07        3.87
         2.87   96.57   .454E+05      203.7         3.20        3.71
         3.06   96.76   .505E+05      232.7         3.28        3.62
         3.25   96.95   .562E+05      264.9         3.36        3.54
         3.44   97.14   .624E+05      300.8         3.43        3.46

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450) 1190.50    72.46    6.67  64.12      1.83      2.39
   OUTFLOW: ID= 1 ( 60450) 1190.50    71.92    6.67  64.12      1.82      2.39
```

```
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36          7.04
     Dep. Storage     (mm)=       2.00          6.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     386.43         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     135.12        144.26
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       4.27 (ii)    10.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.23          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.36          1.91         6.064 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17         6.08
     RUNOFF VOLUME    (mm)=     100.36         59.12        80.91
     TOTAL RAINFALL   (mm)=     102.36        102.36       102.36
     RUNOFF COEFFICIENT   =       0.98          0.58         0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40460):    22.40   6.064     6.08    80.91
      + ID2= 2 ( 60450):  1190.50  71.923     6.67    64.12
        ================================================
        ID = 3 ( 50460):  1212.90  72.820     6.67    64.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00          91.61        0.0450
                    3.00          91.57        0.0450
                    6.00          91.15        0.0450
```

```
                  9.00         90.70        0.0450
                 12.00         89.72        0.0450
                 15.00         88.86        0.0450
                 18.00         88.38    0.0450 /0.0350  Main Channel
                 21.00         87.96        0.0350      Main Channel
                 24.00         88.18    0.0350 /0.0450  Main Channel
                 26.00         88.19        0.0450
                 28.00         88.30        0.0450
                 30.00         90.32        0.0450
                 32.00         90.49        0.0450
                 34.00         90.80        0.0450
                 36.00         90.85        0.0450
                 38.00         90.97        0.0450
                 40.00         91.15        0.0450
                 42.00         91.29        0.0450
                 44.00         91.40        0.0450
                 46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   88.07    .589E+02        0.0         0.34      23.89
        0.21   88.18    .235E+03        0.3         0.54      15.05
        0.41   88.38    .106E+04        1.8         0.85       9.64
        0.61   88.57    .211E+04        5.3         1.22       6.69
        0.81   88.77    .330E+04       10.2         1.51       5.40
        1.01   88.97    .462E+04       16.6         1.76       4.63
        1.21   89.17    .603E+04       24.5         1.99       4.10
        1.41   89.37    .753E+04       33.8         2.19       3.72
        1.61   89.57    .912E+04       44.4         2.38       3.42
        1.81   89.77    .108E+05       56.4         2.56       3.19
        2.00   89.97    .125E+05       69.9         2.72       2.99
        2.20   90.17    .144E+05       84.7         2.88       2.83
        2.40   90.37    .163E+05       99.8         3.00       2.72
        2.60   90.56    .184E+05      114.7         3.04       2.68
        2.80   90.76    .208E+05      132.8         3.13       2.61
        3.00   90.96    .235E+05      148.4         3.09       2.64
        3.20   91.16    .266E+05      170.7         3.13       2.60
        3.40   91.36    .302E+05      194.9         3.16       2.58
        3.60   91.56    .342E+05      223.5         3.20       2.55

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460) 1212.90    72.82    6.67  64.43      2.04      2.75
   OUTFLOW: ID= 1 ( 60460) 1212.90    72.66    6.75  64.43      2.04      2.75


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53        30.66
     Dep. Storage     (mm)=       2.00         5.90
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     775.42        40.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     135.12       134.28
                over (min)       10.00        20.00
     Storage Coeff.  (min)=       7.62 (ii)    15.10 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.13         0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=      15.60         6.38         20.258 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.25          6.08
     RUNOFF VOLUME    (mm)=     100.36        61.19         82.34
     TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
     RUNOFF COEFFICIENT   =       0.98         0.60          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40470):    90.19  20.258     6.08    82.34
     + ID2= 2 ( 60460):  1212.90  72.660     6.75    64.43
       ================================================
       ID = 3 ( 50470):  1303.09  77.451     6.67    65.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         89.19        0.0450
                  2.00         88.89        0.0450
                  4.00         88.54        0.0450
                  6.00         88.31        0.0450
                  8.00         88.14        0.0450
                 10.00         88.02        0.0450
                 12.00         87.99        0.0450
                 14.00         87.90        0.0450
                 16.00         87.84        0.0450
                 19.00         87.55        0.0450
                 22.00         86.85        0.0450
                 25.00         86.23        0.0350      Main Channel
                 28.00         86.23        0.0350      Main Channel
                 31.00         86.60        0.0450
                 34.00         87.49        0.0450
                 37.00         88.15        0.0450
                 41.00         88.21        0.0450
                 45.00         88.29        0.0450
                 48.00         88.36        0.0450
                 50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1303.09    77.45    6.67  65.67      2.36      1.79
   OUTFLOW: ID= 1 ( 60470) 1303.09    76.34    6.75  65.67      2.35      1.79


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82        13.61
     Dep. Storage     (mm)=       2.00         5.80
     Average Slope     (%)=       1.90         1.90
     Length            (m)=     613.35        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=     135.12       190.31
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       6.04 (ii)    10.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.19         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=      11.80         4.95         16.308 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17          6.08
     RUNOFF VOLUME    (mm)=     100.36        70.53         88.12
     TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
     RUNOFF COEFFICIENT   =       0.98         0.69          0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40480):    56.43  16.308     6.08    88.12
     + ID2= 2 ( 60470):  1303.09  76.340     6.75    65.67
       ================================================
       ID = 3 ( 50480):  1359.52  78.379     6.75    66.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         86.90        0.0450
                  2.00         86.76        0.0450
                  4.00         85.96        0.0450
                  6.00         85.44        0.0450
                  8.00         84.83        0.0450
                 10.00         84.50        0.0450
                 12.00         84.15        0.0450
                 14.00         83.85        0.0350      Main Channel
                 16.00         83.86        0.0350      Main Channel
                 18.00         83.99    0.0350 /0.0450  Main Channel
                 20.00         84.27        0.0450
                 22.00         84.55        0.0450
                 24.00         84.88        0.0450
                 26.00         85.37        0.0450
                 27.00         85.68        0.0450
                 28.00         85.91        0.0450
                 29.00         86.08        0.0450
                 30.00         86.21        0.0450
                 31.00         86.29        0.0450
                 34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03        0.3         0.48      10.34
        0.32   84.17    .460E+03        1.2         0.77       6.41
        0.48   84.33    .855E+03        2.8         0.98       5.07
        0.64   84.48    .135E+04        5.2         1.14       4.35
        0.80   84.64    .193E+04        8.3         1.28       3.88
        0.95   84.80    .261E+04       12.3         1.40       3.53
        1.11   84.96    .337E+04       17.4         1.53       3.23
        1.27   85.12    .419E+04       23.5         1.66       2.97
        1.43   85.28    .506E+04       30.5         1.79       2.77
        1.59   85.44    .599E+04       38.5         1.90       2.60
        1.75   85.60    .697E+04       47.3         2.01       2.46
        1.91   85.76    .801E+04       57.1         2.12       2.34
        2.07   85.92    .911E+04       67.8         2.21       2.24
        2.23   86.07    .103E+05       79.5         2.30       2.15
        2.39   86.23    .115E+05       91.9         2.37       2.09
        2.54   86.39    .128E+05      105.7         2.45       2.02
        2.70   86.55    .142E+05      121.2         2.53       1.95
        2.86   86.71    .156E+05      138.0         2.62       1.89
        3.02   86.87    .171E+05      153.0         2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1359.52    78.38    6.75  66.60      2.21      2.29
   OUTFLOW: ID= 1 ( 60480) 1359.52    78.17    6.75  66.60      2.21      2.29


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--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60         4.16
     Dep. Storage     (mm)=       2.00         6.22
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     334.28        53.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     135.12       175.02
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.60 (ii)    12.39 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.23         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.71         1.31          4.881 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17          6.08
     RUNOFF VOLUME    (mm)=     100.36        68.68         87.82
     TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
     RUNOFF COEFFICIENT   =       0.98         0.67          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40490):    16.76   4.881     6.08    87.82
     + ID2= 2 ( 60480):  1359.52  78.175     6.75    66.60
       ================================================
       ID = 3 ( 50490):  1376.28  78.774     6.75    66.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
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```
03979>                Distance      Elevation       Manning
03980>                    0.00          85.84        0.0450
03981>                    6.00          84.32        0.0450
03982>                   12.00          84.21        0.0450
03983>                   18.00          84.12        0.0450
03984>                   24.00          84.08        0.0450
03985>                   30.00          84.10        0.0450
03986>                   36.00          84.03        0.0450
03987>                   42.00          83.92        0.0450
03988>                   48.00          83.88        0.0450
03989>                   54.00          82.88        0.0350      Main Channel
03990>                   60.00          83.12    0.0350 /0.0450  Main Channel
03991>                   64.00          83.65        0.0450
03992>                   68.00          83.60        0.0450
03993>                   72.00          83.67        0.0450
03994>                   76.00          83.70        0.0450
03995>                   80.00          83.82        0.0450
03996>                   84.00          83.90        0.0450
03997>                   88.00          84.05        0.0450
03998>                   92.00          84.16        0.0450
03999>                  100.00          85.83        0.0450
04000>
04001>       <--------------------- TRAVEL TIME TABLE ---------------------->
04002>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
04003>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
04004>         0.16   83.04    .332E+03        0.1         0.32      46.08
04005>         0.31   83.19    .129E+04        0.8         0.57      26.14
04006>         0.47   83.35    .259E+04        2.3         0.79      18.75
04007>         0.62   83.50    .418E+04        4.5         0.96      15.43
04008>         0.78   83.66    .626E+04        7.3         1.04      14.28
04009>         0.93   83.81    .101E+05       11.9         1.05      14.10
04010>         1.09   83.97    .153E+05       17.6         1.02      14.55
04011>         1.24   84.13    .231E+05       26.2         1.00      14.73
04012>         1.40   84.28    .341E+05       41.2         1.07      13.79
04013>         1.55   84.44    .460E+05       61.7         1.19      12.44
04014>         1.71   84.59    .582E+05       86.6         1.32      11.21
04015>         1.86   84.75    .706E+05      115.2         1.45      10.21
04016>         2.02   84.90    .831E+05      147.5         1.57       9.39
04017>         2.17   85.06    .959E+05      183.2         1.70       8.72
04018>         2.33   85.21    .109E+06      222.2         1.81       8.16
04019>         2.48   85.37    .122E+06      264.5         1.93       7.68
04020>         2.64   85.52    .135E+06      310.0         2.03       7.27
04021>         2.79   85.68    .149E+06      358.5         2.14       6.91
04022>         2.95   85.83    .162E+06      410.1         2.24       6.60
04023>
04024>                                      <---- hydrograph ---->   <-pipe / channel->
04025>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
04026>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
04027>    INFLOW : ID= 2 ( 50490) 1376.28    78.77    6.75  66.86      1.66      1.28
04028>    OUTFLOW: ID= 1 ( 60490) 1376.28    76.86    6.92  66.86      1.65      1.26
04029>
04030>
04031>
04032> ------------------------------------------------------------------------------
04033> --------------------
04034> | CALIB            |
04035> | STANDHYD ( 40810)|   Area     (ha)=  20.64
04036> |ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
04037> --------------------
04038>                              IMPERVIOUS    PERVIOUS (i)
04039>      Surface Area     (ha)=      15.92         4.72
04040>      Dep. Storage     (mm)=       2.00         5.43
04041>      Average Slope     (%)=       2.10         2.10
04042>      Length            (m)=     370.92        40.00
04043>      Mannings n           =      0.015        0.260
04044>
04045>      Max.Eff.Inten.(mm/hr)=     135.12       189.26
04046>                    over (min)        5.00        10.00
04047>      Storage Coeff.  (min)=       4.34 (ii)    8.60 (ii)
04048>      Unit Hyd. Tpeak (min)=       5.00        10.00
04049>      Unit Hyd. peak  (cms)=       0.23         0.12
04050>                                                          *TOTALS*
04051>      PEAK FLOW       (cms)=       4.65         1.95          6.595 (iii)
04052>      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
04053>      RUNOFF VOLUME    (mm)=     100.36        70.45          88.76
04054>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
04055>      RUNOFF COEFFICIENT   =       0.98         0.69           0.87
04056>
04057> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
04058>
04059>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04060>            CN*  =  78.8    Ia = Dep. Storage  (Above)
04061>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04062>            THAN THE STORAGE COEFFICIENT.
04063>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04064>
04065> ------------------------------------------------------------------------------
04066>
04067> --------------------
04068> | ADD HYD  ( 50810)|
04069> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04070> --------------------         (ha)    (cms)    (hrs)     (mm)
04071>        ID1= 1 ( 40810):    20.64   6.595     6.08    88.76
04072>      + ID2= 2 ( 60490):  1376.28  76.858     6.92    66.86
04073>        ==========================================================
04074>        ID = 3 ( 50810):  1396.92  77.347     6.92    67.18
04075>
04076>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04077> ------------------------------------------------------------------------------
04078> --------------------
04079> | CALIB            |
04080> | STANDHYD ( 40500)|   Area     (ha)=   9.32
04081> |ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
04082> --------------------
04083>                              IMPERVIOUS    PERVIOUS (i)
04084>      Surface Area     (ha)=       2.52         6.81
04085>      Dep. Storage     (mm)=       2.00         9.76
04086>      Average Slope     (%)=       3.20         3.20
04087>      Length            (m)=     249.31        47.00
04088>      Mannings n           =      0.015        0.350
04089>
04090>      Max.Eff.Inten.(mm/hr)=     135.12       102.94
04091>                    over (min)        5.00        15.00
04092>      Storage Coeff.  (min)=       3.01 (ii)   11.18 (ii)
04093>      Unit Hyd. Tpeak (min)=       5.00        15.00
04094>      Unit Hyd. peak  (cms)=       0.28         0.09
04095>                                                          *TOTALS*
04096>      PEAK FLOW       (cms)=       0.61         1.26          1.722 (iii)
04097>      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
04098>      RUNOFF VOLUME    (mm)=     100.36        54.26          62.32
04099>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
04100>      RUNOFF COEFFICIENT   =       0.98         0.53           0.61
04101>
04102> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
04103> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
04104>               YOU SHOULD CONSIDER SPLITTING THE AREA.
04105>
04106>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04107>            CN*  =  76.7    Ia = Dep. Storage  (Above)
04108>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04109>            THAN THE STORAGE COEFFICIENT.
04110>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04111>
04112> ------------------------------------------------------------------------------
04113>
04114> --------------------
04115> | ADD HYD  ( 50500)|
04116> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04117> --------------------         (ha)    (cms)    (hrs)     (mm)
04118>        ID1= 1 ( 40500):     9.32   1.722     6.08    62.32
04119>      + ID2= 2 ( 50810):  1396.92  77.347     6.92    67.18
04120>        ==========================================================
04121>        ID = 3 ( 50500):  1406.24  77.592     6.92    67.15
04122>
04123>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04124> ------------------------------------------------------------------------------
04125> --------------------
04126> | CALIB            |
04127> | NASHYD   (******)|   Area     (ha)=   3.87   Curve Number    (CN)= 85.0
04128> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
04129> --------------------   U.H. Tp(hrs)=   0.33
04130>
04131>      Unit Hyd Qpeak  (cms)=   0.448
04132>
04133>      PEAK FLOW       (cms)=   0.565 (i)
04134>      TIME TO PEAK    (hrs)=   6.250
04135>      RUNOFF VOLUME    (mm)=  67.118
04136>      TOTAL RAINFALL   (mm)= 102.360
04137>      RUNOFF COEFFICIENT   =   0.656
04138>
04139>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04140>
04141> ------------------------------------------------------------------------------
04142> --------------------
04143> | CALIB            |
04144> | NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
04145> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
04146> --------------------   U.H. Tp(hrs)=   0.16
04147>
04148>      Unit Hyd Qpeak  (cms)=   0.107
04149>
04150>      PEAK FLOW       (cms)=   0.102 (i)
04151>      TIME TO PEAK    (hrs)=   6.083
04152>      RUNOFF VOLUME    (mm)=  66.832
04153>      TOTAL RAINFALL   (mm)= 102.360
04154>      RUNOFF COEFFICIENT   =   0.653
04155>
04156>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04157>
04158> ------------------------------------------------------------------------------
04159> --------------------
04160> | CALIB            |
04161> | NASHYD   (******)|   Area     (ha)=   0.93   Curve Number    (CN)= 85.0
04162> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
04163> --------------------   U.H. Tp(hrs)=   0.23
04164>
04165>      Unit Hyd Qpeak  (cms)=   0.154
04166>
04167>      PEAK FLOW       (cms)=   0.173 (i)
04168>      TIME TO PEAK    (hrs)=   6.167
04169>      RUNOFF VOLUME    (mm)=  67.061
04170>      TOTAL RAINFALL   (mm)= 102.360
04171>      RUNOFF COEFFICIENT   =   0.655
04172>
04173>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04174>
04175> ------------------------------------------------------------------------------
04176> --------------------
04177> | CALIB            |
04178> | STANDHYD (******)|   Area     (ha)=   0.45
04179> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
04180> --------------------
04181>                              IMPERVIOUS    PERVIOUS (i)
04182>      Surface Area     (ha)=       0.45         0.00
04183>      Dep. Storage     (mm)=       2.00         4.48
04184>      Average Slope     (%)=       0.40         1.00
04185>      Length            (m)=      48.30         0.00
04186>      Mannings n           =      0.013        0.030
04187>
04188>      Max.Eff.Inten.(mm/hr)=     135.12       108.03
04189>                    over (min)        5.00         5.00
04190>      Storage Coeff.  (min)=       1.93 (ii)    1.93 (ii)
04191>      Unit Hyd. Tpeak (min)=       5.00         5.00
04192>      Unit Hyd. peak  (cms)=       0.31         0.31
04193>                                                          *TOTALS*
04194>      PEAK FLOW       (cms)=       0.17         0.00          0.169 (iii)
04195>      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
04196>      RUNOFF VOLUME    (mm)=     100.36        67.14         100.03
04197>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
04198>      RUNOFF COEFFICIENT   =       0.98         0.66           0.98
04199>
04200> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
04201>
04202>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04203>            CN*  =  85.0    Ia = Dep. Storage  (Above)
04204>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04205>            THAN THE STORAGE COEFFICIENT.
04206>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04207>
04208> ------------------------------------------------------------------------------
04209> --------------------
04210> | CALIB            |
04211> | STANDHYD (******)|   Area     (ha)=  26.50
04212> |ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
04213> --------------------
04214>                              IMPERVIOUS    PERVIOUS (i)
04215>      Surface Area     (ha)=      13.25        13.25
04216>      Dep. Storage     (mm)=       2.00         4.48
04217>      Average Slope     (%)=       2.00         2.00
04218>      Length            (m)=     420.00        30.00
04219>      Mannings n           =      0.013        0.025
04220>
04221>      Max.Eff.Inten.(mm/hr)=     135.12       164.40
04222>                    over (min)        5.00        10.00
04223>      Storage Coeff.  (min)=       4.35 (ii)    5.97 (ii)
04224>      Unit Hyd. Tpeak (min)=       5.00        10.00
04225>      Unit Hyd. peak  (cms)=       0.23         0.15
04226>                                                          *TOTALS*
04227>      PEAK FLOW       (cms)=       2.92         5.31          8.231 (iii)
04228>      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
04229>      RUNOFF VOLUME    (mm)=     100.36        74.96          82.58
04230>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
04231>      RUNOFF COEFFICIENT   =       0.98         0.73           0.81
04232>
04233> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
04234>
04235>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04236>            CN*  =  85.0    Ia = Dep. Storage  (Above)
04237>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04238>            THAN THE STORAGE COEFFICIENT.
04239>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04240>
04241> ------------------------------------------------------------------------------
04242> --------------------
04243> | RESERVOIR(******)|     OVERFLOW IS ON
04244> | IN= 2---> OUT= 1 |
04245> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
04246> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
04247>                            0.0000      0.0000  |    1.8600      0.9862
04248>                            0.0560      0.3250  |    2.1000      1.0580
04249>                            0.2600      0.4718  |    2.2000      1.2000
04250>                            0.7400      0.6512  |   10.0000      1.2500
04251>                            1.4100      0.8427  |    0.0000      0.0000
04252>
04253>                                  AREA     QPEAK     TPEAK       R.V.
04254>                                  (ha)     (cms)     (hrs)       (mm)
04255>    INFLOW : ID= 2 (******)     26.500     8.231      6.08      82.58
04256>    OUTFLOW: ID= 1 (******)     26.500     2.165      6.33      82.52
04257>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
04258>
04259>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
04260>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
04261>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
04262>
04263>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 26.31
04264>                    TIME SHIFT OF PEAK FLOW          (min)= 15.00
04265>                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.1524
04266>
04267> ------------------------------------------------------------------------------
04268>
04269>   --------------------------
04270>   | Junction Command(30651004) |
04271>   --------------------------
04272>
04273>                              AREA     QPEAK   TPEAK     R.V.
04274>                              (ha)     (cms)    (hrs)     (mm)
04275>   INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
04276>   OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00
04277>
04278>   ------------------------------------------------------------------------------
04279>
04280> --------------------
04281> | ADD HYD  (******)|
04282> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04283> --------------------         (ha)    (cms)    (hrs)     (mm)
04284> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
```

```
 *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
         ID1= 1 (******):    26.50   2.165     6.33    82.52
       + ID2= 2 (******):     0.00   0.000     0.00     0.00
         ================================================
         ID = 3 (******):    26.50   2.165     6.33    82.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89         0.04
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=     115.50         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     135.12       108.03
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       3.25 (ii)    3.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.27         0.27
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.45         0.01        1.463 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08         6.08
     RUNOFF VOLUME    (mm)=     100.36        67.14       100.03
     TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
     RUNOFF COEFFICIENT   =       0.98         0.66         0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.93   0.173     6.17    67.06
       + ID2= 2 (******):     3.93   1.463     6.08   100.03
         ================================================
         ID = 3 (******):     4.86   1.619     6.08    93.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     4.86   1.619     6.08    93.72
       + ID2= 2 (******):     0.45   0.169     6.08   100.03
         ================================================
         ID = 1 (******):     5.31   1.787     6.08    94.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     5.31   1.787     6.08    94.25
       + ID2= 2 (******):    26.50   2.165     6.33    82.52
         ================================================
         ID = 3 (******):    31.81   3.415     6.08    84.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   1.711 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  67.130
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    14.62   1.711     6.42    67.13
       + ID2= 2 (******):    31.81   3.415     6.08    84.48
         ================================================
         ID = 3 (******):    46.43   4.470     6.08    79.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        443.75        0.0450
                   8.50        443.74        0.0450
                  35.47        443.64        0.0450
                  64.60        443.29        0.0450
                  74.71        443.18        0.0450
                  80.25        443.17        0.0450
                 112.17        443.12    0.0450 /0.0350  Main Channel
                 131.57        442.76        0.0350      Main Channel
                 137.50        442.66        0.0350      Main Channel
                 137.91        442.67        0.0350      Main Channel
                 152.28        442.24        0.0350      Main Channel
                 167.40        441.39        0.0350      Main Channel
                 178.29        441.56        0.0350      Main Channel
                 216.75        442.01        0.0350      Main Channel
                 221.54        442.05    0.0350 /0.0450  Main Channel
                 334.66        442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.05    441.45    .114E+03       0.0         0.27       55.89
       0.11    441.50    .457E+03       0.2         0.43       35.21
       0.16    441.56    .103E+04       0.6         0.57       26.87
       0.22    441.61    .185E+04       1.4         0.67       22.84
       0.27    441.67    .297E+04       2.5         0.77       19.84
       0.33    441.72    .437E+04       4.1         0.87       17.59
       0.38    441.78    .605E+04       6.4         0.96       15.85
       0.44    441.83    .802E+04       9.2         1.05       14.47
       0.49    441.89    .103E+05      12.8         1.14       13.35
       0.55    441.94    .128E+05      17.2         1.23       12.42
       0.60    442.00    .157E+05      22.4         1.31       11.63
       0.66    442.05    .188E+05      28.3         1.38       11.07
       0.71    442.11    .225E+05      36.9         1.50       10.16
       0.78    442.17    .277E+05      48.4         1.60        9.54
       0.84    442.24    .339E+05      61.9         1.67        9.13
       0.91    442.30    .412E+05      77.1         1.71        8.90
       0.97    442.36    .495E+05      94.7         1.75        8.71
       1.03    442.43    .589E+05     114.9         1.79        8.54
       1.10    442.49    .693E+05     137.9         1.82        8.38

                                  <---- hydrograph ---->   <-pipe / channel->
                                    AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                    (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)         46.43     4.47     6.08   79.02      0.34      0.88
   OUTFLOW: ID= 1 (******)         46.43     3.85     6.58   79.02      0.32      0.85


--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53

                           AREA     QPEAK     TPEAK     R.V.
                           (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   46.43      3.85      6.58    79.02
     ================================================
     ID= 2  (   2)    :  29.55      1.00      6.58    79.02
     ID= 3  (   2)    :  16.88      2.85      6.58    79.02
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.831
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.653

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.22   0.050     6.08    66.83
       + ID2= 2 (******):    16.88   2.852     6.58    79.02
         ================================================
         ID = 3 (******):    17.10   2.864     6.58    78.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        433.07        0.0450
                  59.66        432.39        0.0450
                  94.25        432.03        0.0450
                 115.71        431.82        0.0450
                 143.84        431.84    0.0450 /0.0350  Main Channel
                 163.59        431.75        0.0350      Main Channel
                 177.84        431.73        0.0350      Main Channel
                 199.51        431.70        0.0350      Main Channel
                 231.74        431.53        0.0350      Main Channel
                 283.71        431.44        0.0350      Main Channel
                 294.09        431.43        0.0350      Main Channel
                 325.65        431.42        0.0350      Main Channel
                 355.24        431.24        0.0350      Main Channel
                 383.70        431.43        0.0350      Main Channel
                 476.17        432.06    0.0350 /0.0450  Main Channel
                 510.88        432.23        0.0450
                 558.61        432.37        0.0450
                 589.84        432.57        0.0450
                 622.97        432.73        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.08    431.32    .108E+03       0.3         0.30       6.68
       0.15    431.39    .434E+03       1.7         0.47       4.21
       0.23    431.47    .119E+04       5.0         0.50       3.99
       0.30    431.54    .252E+04      13.9         0.66       3.02
       0.38    431.62    .417E+04      29.3         0.84       2.37
       0.45    431.69    .604E+04      50.1         0.99       2.01
       0.53    431.77    .828E+04      73.9         1.06       1.87
       0.60    431.84    .109E+05     108.8         1.19       1.67
       0.68    431.92    .142E+05     159.5         1.34       1.48
       0.76    432.01    .176E+05     219.4         1.48       1.34
       0.84    432.09    .213E+05     290.0         1.62       1.22
       0.92    432.17    .252E+05     374.6         1.77       1.12
       1.01    432.25    .293E+05     469.2         1.91       1.04
       1.09    432.33    .338E+05     573.9         2.02       0.98
       1.17    432.41    .386E+05     689.9         2.13       0.93
       1.25    432.49    .435E+05     817.2         2.24       0.89
       1.33    432.57    .487E+05     955.3         2.34       0.85
       1.41    432.65    .541E+05    1103.5         2.43       0.82
       1.49    432.73    .597E+05    1262.7         2.52       0.79

                                  <---- hydrograph ---->   <-pipe / channel->
                                    AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                    (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)         17.10     2.86     6.58   78.86      0.18      0.48
   OUTFLOW: ID= 1 (******)         17.10     2.84     6.67   78.86      0.18      0.48


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     3.87   0.565     6.25    67.12
       + ID2= 2 (******):     0.45   0.102     6.08    66.83
         ================================================
         ID = 3 (******):     4.32   0.635     6.25    67.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     4.32   0.635     6.25    67.09
       + ID2= 2 (******):    17.10   2.840     6.67    78.86
         ================================================
         ID = 1 (******):    21.42   3.208     6.58    76.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
```

```
                  0.00        430.79        0.0450
                 23.82        429.79    0.0450 /0.0350  Main Channel
                 44.05        429.11        0.0350      Main Channel
                 70.46        428.15        0.0350      Main Channel
                112.31        427.60        0.0350      Main Channel
                150.77        427.27        0.0350      Main Channel
                179.17        427.15        0.0350      Main Channel
                214.90        427.16        0.0350      Main Channel
                261.89        427.25        0.0350      Main Channel
                317.65        427.56        0.0350      Main Channel
                382.75        427.99        0.0350      Main Channel
                394.40        428.11        0.0350      Main Channel
                432.80        428.07        0.0350      Main Channel
                432.91        428.07        0.0350      Main Channel
                462.57        428.15        0.0350      Main Channel
                522.90        429.79    0.0350 /0.0450  Main Channel
                585.04        429.90        0.0450
                731.92        430.62        0.0450

     <---------- TRAVEL TIME TABLE ---------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.18   427.33    .207E+04      11.5         0.73       2.99
       0.35   427.50    .570E+04      49.9         1.15       1.91
       0.53   427.68    .105E+05     119.2         1.49       1.47
       0.70   427.85    .163E+05     221.8         1.79       1.22
       0.88   428.03    .229E+05     360.8         2.06       1.06
       1.06   428.21    .312E+05     509.7         2.14       1.02
       1.23   428.38    .405E+05     771.0         2.49       0.88
       1.41   428.56    .500E+05    1076.3         2.82       0.77
       1.58   428.73    .598E+05    1423.8         3.12       0.70
       1.76   428.91    .699E+05    1812.5         3.40       0.64
       1.94   429.09    .802E+05    2241.5         3.66       0.60
       2.11   429.26    .907E+05    2709.1         3.91       0.56
       2.29   429.44    .102E+06    3215.8         4.15       0.53
       2.46   429.61    .113E+06    3761.6         4.38       0.50
       2.64   429.79    .124E+06    4346.4         4.59       0.48
       2.85   430.00    .139E+06    5173.9         4.88       0.45
       3.06   430.20    .156E+06    6075.9         5.12       0.43
       3.26   430.41    .173E+06    7054.9         5.33       0.41
       3.47   430.62    .193E+06    8114.3         5.52       0.40

                                  <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
 INFLOW : ID= 2 (******)    21.42     3.21    6.58  76.48      0.05      0.73
 OUTFLOW: ID= 1 (******)    21.42     3.20    6.67  76.48      0.05      0.73


    **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.180 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.061
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.144 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.943
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.654

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.69   0.144     6.08    66.94
     + ID2= 2 (******):     0.97   0.180     6.17    67.06
       ================================================
       ID = 3 (******):     1.66   0.322     6.17    67.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     1.66   0.322     6.17    67.01
     + ID2= 2 (******):    21.42   3.198     6.67    76.48
       ================================================
       ID = 3 (******):    23.08   3.289     6.67    75.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   23.08      3.29      6.67   75.80
     ================================================
     ID= 2  (   2)    :  23.08      3.29      6.67   75.80
     ID= 3  (   2)    :   0.00      0.00      6.67   75.80
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.96         0.25
     Dep. Storage     (mm)=        2.00         4.48
     Average Slope     (%)=        0.64         0.54
     Length            (m)=       63.89       157.20
     Mannings n           =       0.013        0.030

     Max.Eff.Inten.(mm/hr)=      135.12       108.03
                   over (min)      5.00        10.00
     Storage Coeff.  (min)=       1.98 (ii)    5.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.36         0.07          0.426 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        67.14          93.38
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.66           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        2.32         0.58
     Dep. Storage     (mm)=        2.00         4.48
     Average Slope     (%)=        0.70         0.60
     Length            (m)=      166.18       124.91
     Mannings n           =       0.013        0.030

     Max.Eff.Inten.(mm/hr)=      135.12       108.03
                   over (min)      5.00        10.00
     Storage Coeff.  (min)=       3.42 (ii)    6.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.86         0.15          1.013 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        67.14          93.71
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.66           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     2.90   1.013     6.08    93.71
     + ID2= 2 (******):     1.21   0.426     6.08    93.38
       ================================================
       ID = 3 (******):     4.11   1.439     6.08    93.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.85     0.00     0.00     0.00     0.00     0.85
        0.85     1.00     0.00     0.00     0.00     1.85
        0.85   100.00     0.00     0.00     0.00   100.85

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    4.11      1.44      6.08   93.62
     ================================================
     ID= 2  (   2)    :   3.64      0.85      6.08   93.62
     ID= 3  (   2)    :   0.47      0.59      6.08   93.62
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.00   0.000     6.67    75.80
     + ID2= 2 (******):     3.64   0.847     6.08    93.62
       ================================================
       ID = 3 (******):     3.64   0.847     6.08    93.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     5.20     0.00     0.00     0.00     5.20
        1.00     5.20     0.00     0.00     0.00     6.20
      100.00     5.20     0.00     0.00     0.00   105.20

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    3.64      0.85      6.08   93.62
     ================================================
     ID= 2  (   2)    :   0.00      0.00      6.08   93.62
     ID= 3  (   2)    :   3.64      0.85      6.08   93.62
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    23.08   3.289     6.67    75.80
     + ID2= 2 (******):     0.00   0.000     6.08    93.62
       ================================================
       ID = 3 (******):    23.08   3.289     6.67    75.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   23.08      3.29      6.67   75.80
     ================================================
     ID= 2  (   2)    :  23.08      3.29      6.67   75.80
     ID= 3  (   2)    :   0.00      0.00      6.67   75.80
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
```

```
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.01     0.00     0.00     0.00     0.00     0.01
        0.06     0.00     0.00     0.00     0.00     0.06
        0.08     0.00     0.00     0.00     0.00     0.08
        0.12     0.00     0.00     0.00     0.00     0.12
        0.20     0.00     0.00     0.00     0.00     0.20
        0.25     0.00     0.00     0.00     0.00     0.25
        0.30     0.00     0.00     0.00     0.00     0.30
        0.33     0.00     0.00     0.00     0.00     0.33
        0.37     0.00     0.00     0.00     0.00     0.37
        0.39     0.00     0.00     0.00     0.00     0.39
        0.42     1.43     0.00     0.00     0.00     1.85
        0.44     8.83     0.00     0.00     0.00     9.27
        0.47    25.03     0.00     0.00     0.00    25.50
        0.49    52.11     0.00     0.00     0.00    52.61
        0.52    91.81     0.00     0.00     0.00    92.33
        0.53   126.04     0.00     0.00     0.00   126.57

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):  23.08      3.29      6.67   75.80
      ================================================
      ID= 2  (   2)    :   6.69      0.42      6.67   75.80
      ID= 3  (   2)    :  16.39      2.87      6.67   75.80
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.81         0.01
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.50         1.00
      Length            (m)=      18.40         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=     135.12       108.03
                   over (min)        5.00         5.00
      Storage Coeff.  (min)=       1.01 (ii)    1.01 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.34
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.30         0.00          0.307 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.08          6.08
      RUNOFF VOLUME    (mm)=     100.36        67.14        100.03
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.66          0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.82    0.307     6.08   100.03
      + ID2= 2 (******):     0.00    0.000     6.67    75.80
        ================================================
        ID = 3 (******):     0.82    0.307     6.08   100.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.82    0.307     6.08   100.02
      + ID2= 2 (******):    16.39    2.866     6.67    75.80
        ================================================
        ID = 1 (******):    17.21    2.898     6.58    76.96

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.03     0.00     0.00     0.00     0.00     0.03
        0.04     0.00     0.00     0.00     0.00     0.04
        0.09     0.00     0.00     0.00     0.00     0.09
        0.12     0.00     0.00     0.00     0.00     0.13
        0.20     0.00     0.00     0.00     0.00     0.20
        0.30     0.00     0.00     0.00     0.00     0.30
        0.37     0.00     0.00     0.00     0.00     0.37
        0.43     0.00     0.00     0.00     0.00     0.43
        0.48     0.00     0.00     0.00     0.00     0.48
        0.52     0.00     0.00     0.00     0.00     0.52
        0.57     0.00     0.00     0.00     0.00     0.57
        0.67     0.00     0.00     0.00     0.00     0.67
        0.68     0.00     0.00     0.00     0.00     0.68
        0.68     0.02     0.00     0.00     0.00     0.70
        0.72     0.56     0.00     0.00     0.00     1.28
        0.73     0.75     0.01     0.00     0.00     1.48
        1.10     1.87     0.54     0.00     0.00     3.51
        1.40     2.25     2.61     0.00     0.00     6.26

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):  17.21      2.90      6.58   76.96
      ================================================
      ID= 2  (   3)    :   8.29      0.99      6.58   76.96
      ID= 3  (   3)    :   7.58      1.53      6.58   76.96
      ID= 4  (   3)    :   1.34      0.38      6.58   76.96
      ID= 5  (   3)    :   0.00      0.00      0.00    0.00
      ID= 6  (   3)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.69    0.423     6.67    75.80
      + ID2= 2 (******):     8.29    0.989     6.58    76.96
        ================================================
        ID = 3 (******):    14.98    1.412     6.58    76.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  11.36   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

      Unit Hyd Qpeak  (cms)=   1.315

      PEAK FLOW       (cms)=   1.657 (i)
      TIME TO PEAK    (hrs)=   6.250
      RUNOFF VOLUME    (mm)=  67.118
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.656

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.75   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

      Unit Hyd Qpeak  (cms)=   0.130

      PEAK FLOW       (cms)=   0.143 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  67.047
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.655

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area    (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      54.14        24.23
      Dep. Storage     (mm)=       2.00         5.78
      Average Slope     (%)=       1.20         1.20
      Length            (m)=     722.82        47.00
      Mannings n           =      0.015        0.260

      Max.Eff.Inten.(mm/hr)=     135.12       150.51
                   over (min)       10.00        20.00
      Storage Coeff.  (min)=       7.66 (ii)   15.53 (ii)
      Unit Hyd. Tpeak (min)=      10.00        20.00
      Unit Hyd. peak  (cms)=       0.13         0.07
                                                          *TOTALS*
      PEAK FLOW       (cms)=      14.11         5.65         18.275 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.25          6.08
      RUNOFF VOLUME    (mm)=     100.36        66.19         85.41
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.65          0.83


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        144.07        0.0450
                    9.00        143.84        0.0450
                   12.00        142.90        0.0450
                   15.00        142.48        0.0450
                   18.00        142.43    0.0450 /0.0350  Main Channel
                   21.00        142.31        0.0350      Main Channel
                   24.00        142.12        0.0350      Main Channel
                   27.00        142.44    0.0350 /0.0450  Main Channel
                   30.00        142.71        0.0450
                   33.00        143.18        0.0450
                   36.00        143.27        0.0450
                   37.00        143.36        0.0450
                   38.00        143.64        0.0450
                   39.00        143.92        0.0450
                   40.00        143.93        0.0450
                   45.00        144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)    (cu.m.)      (cms)        (m/s)      (min)
        0.08   142.20    .282E+02       0.0         0.24      26.26
        0.16   142.27    .113E+03       0.1         0.38      16.54
        0.23   142.35    .257E+03       0.3         0.48      13.09
        0.31   142.43    .477E+03       0.7         0.57      11.02
        0.42   142.54    .969E+03       2.0         0.76       8.24
        0.53   142.65    .157E+04       3.8         0.92       6.80
        0.64   142.76    .224E+04       6.3         1.06       5.90
        0.75   142.87    .299E+04       9.5         1.19       5.26
        0.86   142.98    .379E+04      13.2         1.31       4.77
        0.97   143.09    .463E+04      17.6         1.43       4.37
        1.08   143.20    .552E+04      22.5         1.53       4.09
        1.19   143.31    .653E+04      27.9         1.60       3.90
        1.30   143.42    .761E+04      34.4         1.70       3.69
        1.41   143.53    .874E+04      41.7         1.79       3.49
        1.52   143.64    .989E+04      49.7         1.89       3.32
        1.63   143.75    .111E+05      58.3         1.98       3.17
        1.74   143.85    .123E+05      66.9         2.04       3.06
        1.85   143.96    .137E+05      73.2         2.01       3.11
        1.96   144.07    .153E+05      81.5         2.00       3.13

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 40600)    78.37    18.28     6.08   85.41       0.98       1.44
   OUTFLOW: ID= 1 ( 60600)    78.37    17.82     6.17   85.41       0.97       1.43


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area    (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.75         2.18
      Dep. Storage     (mm)=       2.00         8.00
      Average Slope     (%)=       2.90         2.90
      Length            (m)=     162.03        40.00
      Mannings n           =      0.015        0.340

      Max.Eff.Inten.(mm/hr)=     135.12       118.42
                   over (min)        5.00        10.00
      Storage Coeff.  (min)=       2.40 (ii)    9.49 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.30         0.12
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.47         0.53          0.996 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.08          6.08
      RUNOFF VOLUME    (mm)=     100.36        58.21         71.54
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.57          0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  76.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40610):     3.94    0.996     6.08    71.54
      + ID2= 2 ( 60600):    78.37   17.816     6.17    85.41
        ================================================
        ID = 3 ( 50600):    82.31   18.440     6.17    84.75

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
05203> ------------------------------------------------------------------------------
05204> --------------------
05205> | ROUTE CHN( 60610)|
05206> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05207> --------------------
05208>                <------ DATA FOR SECTION (   1.1) ------>
05209>                Distance      Elevation       Manning
05210>                    0.00         143.40        0.0450
05211>                    2.00         142.92        0.0450
05212>                    4.00         142.14        0.0450
05213>                    6.00         141.49        0.0450
05214>                    8.00         141.11        0.0450
05215>                   10.00         141.00    0.0450 /0.0350  Main Channel
05216>                   12.00         140.98        0.0350      Main Channel
05217>                   14.00         140.82        0.0350      Main Channel
05218>                   16.00         141.02    0.0350 /0.0450  Main Channel
05219>                   18.00         141.19        0.0450
05220>                   20.00         141.19        0.0450
05221>                   22.00         141.44        0.0450
05222>                   24.00         142.00        0.0450
05223>                   26.00         142.20        0.0450
05224>                   28.00         142.39        0.0450
05225>                   30.00         142.96        0.0450
05226>                   31.00         143.13        0.0450
05227>                   32.00         143.28        0.0450
05228>                   33.00         143.41        0.0450
05229>                   34.00         143.44        0.0450
05230>
05231>       <---------------------- TRAVEL TIME TABLE ---------------------->
05232>        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
05233>          (m)      (m)      (cu.m.)       (cms)         (m/s)       (min)
05234>         0.09   140.91     .314E+02        0.0          0.24       23.12
05235>         0.18   141.00     .132E+03        0.1          0.31       17.83
05236>         0.33   141.14     .502E+03        0.9          0.58        9.54
05237>         0.47   141.29     .107E+04        2.4          0.74        7.47
05238>         0.61   141.43     .175E+04        4.7          0.89        6.20
05239>         0.75   141.57     .251E+04        7.9          1.05        5.31
05240>         0.89   141.71     .332E+04       11.8          1.19        4.68
05241>         1.03   141.85     .416E+04       16.5          1.32        4.21
05242>         1.17   141.99     .506E+04       21.8          1.44        3.86
05243>         1.31   142.13     .601E+04       27.5          1.52        3.64
05244>         1.45   142.27     .705E+04       34.0          1.61        3.46
05245>         1.59   142.41     .818E+04       41.5          1.69        3.29
05246>         1.73   142.55     .936E+04       50.2          1.79        3.11
05247>         1.88   142.69     .106E+05       59.8          1.88        2.95
05248>         2.02   142.84     .118E+05       70.2          1.97        2.81
05249>         2.16   142.98     .132E+05       81.2          2.06        2.70
05250>         2.30   143.12     .145E+05       92.6          2.12        2.61
05251>         2.44   143.26     .159E+05      104.8          2.19        2.54
05252>         2.58   143.40     .174E+05      117.7          2.24        2.47
05253>
05254>                                    <---- hydrograph ---->   <-pipe / channel->
05255>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
05256>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
05257>    INFLOW : ID= 2 ( 50600)   82.31    18.44    6.17  84.75      1.08       1.36
05258>    OUTFLOW: ID= 1 ( 60610)   82.31    17.26    6.17  84.75      1.05       1.33
05259>
05260>
05261>
05262> ------------------------------------------------------------------------------
05263> --------------------
05264> | CALIB            |
05265> | STANDHYD ( 40620)|   Area     (ha)=   5.67
05266> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
05267> --------------------
05268>                                IMPERVIOUS    PERVIOUS (i)
05269>      Surface Area     (ha)=       4.30         1.37
05270>      Dep. Storage     (mm)=       2.00         5.59
05271>      Average Slope     (%)=       1.50         1.50
05272>      Length            (m)=     194.41        43.00
05273>      Mannings n           =      0.015        0.270
05274>
05275>      Max.Eff.Inten.(mm/hr)=     135.12       180.46
05276>                    over (min)        5.00        10.00
05277>      Storage Coeff.  (min)=       3.26 (ii)    9.90 (ii)
05278>      Unit Hyd. Tpeak (min)=       5.00        10.00
05279>      Unit Hyd. peak  (cms)=       0.27         0.11
05280>                                                          *TOTALS*
05281>      PEAK FLOW       (cms)=       1.28         0.51          1.794 (iii)
05282>      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
05283>      RUNOFF VOLUME    (mm)=     100.36        69.68          88.29
05284>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
05285>      RUNOFF COEFFICIENT   =       0.98         0.68           0.86
05286>
05287> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05288>
05289>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05290>              CN*  =  79.0    Ia = Dep. Storage  (Above)
05291>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05292>            THAN THE STORAGE COEFFICIENT.
05293>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05294>
05295> ------------------------------------------------------------------------------
05296>
05297> --------------------
05298> | ADD HYD  ( 50610)|
05299> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05300> --------------------         (ha)    (cms)    (hrs)     (mm)
05301>        ID1= 1 ( 40620):     5.67    1.794     6.08    88.29
05302>      + ID2= 2 ( 60610):    82.31   17.262     6.17    84.75
05303>        ========================================================
05304>        ID = 3 ( 50610):    87.98   18.164     6.17    84.97
05305>
05306>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05307> ------------------------------------------------------------------------------
05308> --------------------
05309> | ROUTE CHN( 60620)|
05310> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05311> --------------------
05312>                <------ DATA FOR SECTION (   1.1) ------>
05313>                Distance      Elevation       Manning
05314>                    0.00         142.03        0.0450
05315>                    1.00         141.71        0.0450
05316>                    2.00         141.35        0.0450
05317>                    3.00         141.01        0.0450
05318>                    4.00         140.79        0.0450
05319>                    5.00         140.56        0.0450
05320>                    6.00         140.44        0.0450
05321>                    7.00         140.30    0.0450 /0.0350  Main Channel
05322>                    8.00         140.08        0.0350      Main Channel
05323>                    9.00         139.88        0.0350      Main Channel
05324>                   10.00         139.97        0.0350      Main Channel
05325>                   11.00         140.12        0.0350      Main Channel
05326>                   12.00         140.35    0.0350 /0.0450  Main Channel
05327>                   13.00         140.52        0.0450
05328>                   14.00         140.73        0.0450
05329>                   15.00         140.97        0.0450
05330>                   16.00         141.27        0.0450
05331>                   17.00         141.57        0.0450
05332>                   18.00         141.89        0.0450
05333>                   19.00         142.07        0.0450
05334>
05335>       <---------------------- TRAVEL TIME TABLE ---------------------->
05336>        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
05337>          (m)      (m)      (cu.m.)       (cms)         (m/s)       (min)
05338>         0.10   139.99     .161E+02        0.0          0.36        8.21
05339>         0.21   140.09     .579E+02        0.2          0.59        5.04
05340>         0.31   140.19     .120E+03        0.5          0.78        3.79
05341>         0.42   140.30     .200E+03        1.1          0.95        3.12
05342>         0.53   140.41     .313E+03        2.1          1.18        2.51
05343>         0.65   140.53     .456E+03        3.5          1.36        2.18
05344>         0.76   140.65     .630E+03        5.3          1.50        1.98
05345>         0.88   140.76     .826E+03        7.6          1.63        1.82
05346>         0.99   140.88     .104E+04       10.3          1.75        1.69
05347>         1.11   140.99     .128E+04       13.4          1.87        1.59
05348>         1.23   141.11     .154E+04       17.1          1.98        1.50
05349>         1.34   141.22     .180E+04       21.2          2.09        1.42
05350>         1.46   141.34     .209E+04       25.8          2.20        1.35
05351>         1.57   141.45     .239E+04       30.9          2.30        1.29
05352>         1.69   141.57     .270E+04       36.4          2.40        1.24
05353>         1.80   141.69     .303E+04       42.4          2.49        1.19
05354>         1.92   141.80     .337E+04       48.9          2.58        1.15
05355>         2.04   141.92     .373E+04       55.9          2.67        1.11
05356>         2.15   142.03     .411E+04       63.2          2.74        1.08
05357>
05358>                                    <---- hydrograph ---->   <-pipe / channel->
05359>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
05360>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
05361>    INFLOW : ID= 2 ( 50610)   87.98    18.16    6.17  84.97      1.26       2.01
05362>    OUTFLOW: ID= 1 ( 60620)   87.98    18.14    6.25  84.97      1.26       2.01
05363>
05364>
05365>
05366> ------------------------------------------------------------------------------
05367> --------------------
05368> | CALIB            |
05369> | STANDHYD ( 40640)|   Area     (ha)=   2.13
05370> |ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
05371> --------------------
05372>                                IMPERVIOUS    PERVIOUS (i)
05373>      Surface Area     (ha)=       0.91         1.23
05374>      Dep. Storage     (mm)=       2.00         7.60
05375>      Average Slope     (%)=       1.70         1.70
05376>      Length            (m)=     119.23        45.00
05377>      Mannings n           =      0.015        0.330
05378>
05379>      Max.Eff.Inten.(mm/hr)=     135.12       115.95
05380>                    over (min)        5.00        15.00
05381>      Storage Coeff.  (min)=       2.34 (ii)   11.19 (ii)
05382>      Unit Hyd. Tpeak (min)=       5.00        15.00
05383>      Unit Hyd. peak  (cms)=       0.30         0.09
05384>                                                          *TOTALS*
05385>      PEAK FLOW       (cms)=       0.25         0.26          0.483 (iii)
05386>      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
05387>      RUNOFF VOLUME    (mm)=     100.36        59.11          72.14
05388>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
05389>      RUNOFF COEFFICIENT   =       0.98         0.58           0.70
05390>
05391> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05392>
05393>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05394>              CN*  =  78.1    Ia = Dep. Storage  (Above)
05395>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05396>            THAN THE STORAGE COEFFICIENT.
05397>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05398>
05399> ------------------------------------------------------------------------------
05400>
05401> --------------------
05402> | ADD HYD  ( 50630)|
05403> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05404> --------------------         (ha)    (cms)    (hrs)     (mm)
05405>        ID1= 1 ( 40640):     2.13    0.483     6.08    72.14
05406>      + ID2= 2 ( 60620):    87.98   18.138     6.25    84.97
05407>        ========================================================
05408>        ID = 3 ( 50630):    90.11   18.416     6.25    84.67
05409>
05410>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05411> ------------------------------------------------------------------------------
05412> --------------------
05413> | CALIB            |
05414> | STANDHYD ( 40630)|   Area     (ha)=  20.54
05415> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
05416> --------------------
05417>                                IMPERVIOUS    PERVIOUS (i)
05418>      Surface Area     (ha)=      13.13         7.40
05419>      Dep. Storage     (mm)=       2.00         5.95
05420>      Average Slope     (%)=       1.40         1.40
05421>      Length            (m)=     370.01        42.00
05422>      Mannings n           =      0.015        0.270
05423>
05424>      Max.Eff.Inten.(mm/hr)=     135.12       137.45
05425>                    over (min)        5.00        15.00
05426>      Storage Coeff.  (min)=       4.89 (ii)   12.35 (ii)
05427>      Unit Hyd. Tpeak (min)=       5.00        15.00
05428>      Unit Hyd. peak  (cms)=       0.22         0.08
05429>                                                          *TOTALS*
05430>      PEAK FLOW       (cms)=       3.94         1.82          5.556 (iii)
05431>      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
05432>      RUNOFF VOLUME    (mm)=     100.36        64.77          83.51
05433>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
05434>      RUNOFF COEFFICIENT   =       0.98         0.63           0.82
05435>
05436> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05437>
05438>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05439>              CN*  =  79.5    Ia = Dep. Storage  (Above)
05440>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05441>            THAN THE STORAGE COEFFICIENT.
05442>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05443>
05444> ------------------------------------------------------------------------------
05445>
05446> --------------------
05447> | ADD HYD  ( 50640)|
05448> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05449> --------------------         (ha)    (cms)    (hrs)     (mm)
05450>        ID1= 1 ( 40630):    20.54    5.556     6.08    83.51
05451>      + ID2= 2 ( 50630):    90.11   18.416     6.25    84.67
05452>        ========================================================
05453>        ID = 3 ( 50640):   110.65   21.708     6.17    84.46
05454>
05455>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05456> ------------------------------------------------------------------------------
05457>
05458> --------------------
05459> | ADD HYD  (******)|
05460> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05461> --------------------         (ha)    (cms)    (hrs)     (mm)
05462>        ID1= 1 (******):     0.75    0.143     6.17    67.05
05463>      + ID2= 2 ( 50640):   110.65   21.708     6.17    84.46
05464>        ========================================================
05465>        ID = 3 (******):   111.40   21.851     6.17    84.34
05466>
05467>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05468> ------------------------------------------------------------------------------
05469>
05470> --------------------
05471> | ADD HYD  (******)|
05472> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05473> --------------------         (ha)    (cms)    (hrs)     (mm)
05474>        ID1= 1 (******):    11.36    1.657     6.25    67.12
05475>      + ID2= 2 (******):   111.40   21.851     6.17    84.34
05476>        ========================================================
05477>        ID = 3 (******):   122.76   23.404     6.17    82.74
05478>
05479>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05480> ------------------------------------------------------------------------------
05481> --------------------
05482> | ROUTE CHN(******)|
05483> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05484> --------------------
05485>                <------ DATA FOR SECTION (   1.1) ------>
05486>                Distance      Elevation       Manning
05487>                    0.00         447.10        0.0450
05488>                   42.83         446.80        0.0450
05489>                   42.89         446.80        0.0450
05490>                   43.24         446.79        0.0450
05491>                  122.57         446.48        0.0450
05492>                  154.02         446.22        0.0450
05493>                  191.79         446.32    0.0450 /0.0350  Main Channel
05494>                  199.05         442.27        0.0350      Main Channel
05495>                  199.74         442.33        0.0350      Main Channel
05496>                  212.02         444.19        0.0350      Main Channel
05497>                  232.17         444.54    0.0350 /0.0450  Main Channel
05498>                  348.58         444.42        0.0450
05499>                  359.23         444.30        0.0450
05500>                  381.33         444.03        0.0450
05501>                  483.65         444.18        0.0450
05502>                  548.64         445.87        0.0450
05503>
05504>       <---------------------- TRAVEL TIME TABLE ---------------------->
05505>        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
05506>          (m)      (m)      (cu.m.)       (cms)         (m/s)       (min)
05507>         0.19   442.46     .184E+03        0.1          0.65       24.29
05508>         0.38   442.65     .662E+03        0.7          1.01       15.64
```

```
        0.57   442.84    .143E+04       2.0          1.31       12.09
        0.76   443.03    .247E+04       4.1          1.57       10.05
        0.95   443.22    .381E+04       7.3          1.81        8.70
        1.14   443.41    .543E+04      11.7          2.04        7.73
        1.33   443.60    .733E+04      17.5          2.26        6.99
        1.52   443.79    .952E+04      24.8          2.46        6.41
        1.71   443.98    .120E+05      33.7          2.66        5.93
        1.89   444.16    .211E+05      47.0          2.11        7.49
        2.08   444.35    .469E+05      73.0          1.47       10.71
        2.27   444.54    .855E+05     117.6          1.30       12.12
        2.46   444.73    .140E+06     240.0          1.62        9.75
        2.65   444.92    .197E+06     400.4          1.92        8.20
        2.84   445.11    .255E+06     595.0          2.21        7.13
        3.03   445.30    .314E+06     821.8          2.48        6.37
        3.22   445.49    .374E+06    1079.2          2.73        5.78
        3.41   445.68    .436E+06    1366.3          2.96        5.32
        3.60   445.87    .500E+06    1682.3          3.19        4.95

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  122.76    23.40    6.17  82.74      1.48       2.42
   OUTFLOW: ID= 1 (******)  122.76    22.08    6.25  82.74      1.44       2.38


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.091 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  66.979
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.654

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.45   0.091     6.17    66.98
      + ID2= 2 (******):   122.76  22.082     6.25    82.74
        ================================================
        ID = 3 (******):   123.21  22.158     6.25    82.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.19   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.362 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.096
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.39   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.083

     PEAK FLOW       (cms)=   0.081 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.943
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.654

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.39   0.081     6.08    66.94
      + ID2= 2 (******):     2.19   0.362     6.17    67.10
        ================================================
        ID = 3 (******):     2.58   0.442     6.17    67.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.58   0.442     6.17    67.07
      + ID2= 2 (******):   123.21  22.158     6.25    82.69
        ================================================
        ID = 1 (******):   125.79  22.582     6.25    82.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        429.12        0.0450
                  37.54        428.86        0.0450
                  53.31        428.70        0.0450
                  81.17        428.24        0.0450
                  99.28        428.15    0.0450 /0.0350  Main Channel
                 114.53        427.72        0.0350      Main Channel
                 119.88        426.51        0.0350      Main Channel
                 124.17        425.84        0.0350      Main Channel
                 206.01        425.90        0.0350      Main Channel
                 209.64        426.51        0.0350      Main Channel
                 214.21        426.89        0.0350      Main Channel
                 231.49        427.17        0.0350      Main Channel
                 268.61        427.89    0.0350 /0.0450  Main Channel
                 351.58        428.15        0.0450
                 368.27        428.31        0.0450
                 405.75        428.52        0.0450
                 416.79        428.59        0.0450
                 440.06        428.76        0.0450
                 469.88        428.97        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.16   426.00    .218E+04       4.1          0.39       8.87
       0.31   426.16    .495E+04      15.8          0.67       5.22
       0.47   426.32    .779E+04      33.2          0.89       3.92
       0.63   426.47    .107E+05      55.4          1.08       3.22
       0.79   426.63    .137E+05      81.8          1.25       2.78
       0.94   426.79    .167E+05     112.4          1.40       2.48
       1.10   426.95    .199E+05     144.6          1.52       2.29
       1.26   427.10    .233E+05     176.4          1.58       2.20
       1.42   427.26    .271E+05     214.5          1.65       2.11
       1.57   427.42    .312E+05     258.4          1.73       2.01
       1.73   427.58    .356E+05     307.7          1.81       1.93
       1.89   427.73    .402E+05     362.0          1.88       1.85
       2.05   427.89    .452E+05     415.1          1.91       1.82
       2.23   428.07    .525E+05     501.3          1.99       1.74
       2.41   428.25    .621E+05     609.1          2.05       1.70
       2.59   428.43    .733E+05     739.1          2.10       1.65
       2.77   428.61    .862E+05     886.8          2.15       1.62
       2.95   428.79    .101E+06    1053.9          2.19       1.59
       3.13   428.97    .116E+06    1240.2          2.22       1.57

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  125.79    22.58    6.25  82.37      0.38       0.74
   OUTFLOW: ID= 1 (******)  125.79    22.15    6.33  82.37      0.37       0.73


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.410 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  67.106
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        443.75        0.0000
                   8.50        443.74        0.0450
                  35.47        443.64        0.0450
                  64.60        443.29        0.0450
                  74.71        443.18        0.0450
                  80.25        443.17        0.0450
                 112.17        443.12    0.0450 /0.0350  Main Channel
                 131.57        442.76        0.0350      Main Channel
                 137.50        442.66        0.0350      Main Channel
                 137.91        442.67        0.0350      Main Channel
                 152.28        442.24        0.0350      Main Channel
                 167.40        441.39        0.0350      Main Channel
                 178.29        441.56        0.0350      Main Channel
                 216.75        442.01        0.0350      Main Channel
                 221.54        442.05    0.0350 /0.0450  Main Channel
                 334.66        442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.05   441.45    .216E+02       0.0          0.17      16.51
       0.11   441.50    .864E+02       0.1          0.28      10.40
       0.16   441.56    .194E+03       0.4          0.36       7.94
       0.22   441.61    .350E+03       0.9          0.43       6.75
       0.27   441.67    .561E+03       1.6          0.49       5.86
       0.33   441.72    .825E+03       2.6          0.55       5.20
       0.38   441.78    .114E+04       4.1          0.62       4.68
       0.44   441.83    .152E+04       5.9          0.67       4.27
       0.49   441.89    .194E+04       8.2          0.73       3.94
       0.55   441.94    .242E+04      11.0          0.79       3.67
       0.60   442.00    .296E+04      14.3          0.84       3.44
       0.66   442.05    .355E+04      18.1          0.88       3.27
       0.71   442.11    .425E+04      23.6          0.96       3.00
       0.78   442.17    .523E+04      31.0          1.02       2.82
       0.84   442.24    .641E+04      39.6          1.07       2.70
       0.91   442.30    .778E+04      49.3          1.10       2.63
       0.97   442.36    .935E+04      60.5          1.12       2.57
       1.03   442.43    .111E+05      73.5          1.14       2.52
       1.10   442.49    .131E+05      88.2          1.16       2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   29.55     1.00    6.58  79.02      0.23       0.44
   OUTFLOW: ID= 1 (******)   29.55     1.00    7.00  79.01      0.23       0.44


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.489 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  67.131
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.24   0.489     6.42    67.13
      + ID2= 2 (******):    29.55   1.000     7.00    79.01
        ================================================
        ID = 3 (******):    33.79   1.487     6.42    77.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.59   0.410     6.25    67.11
      + ID2= 2 (******):    33.79   1.487     6.42    77.52
        ================================================
        ID = 3 (******):    36.38   1.857     6.33    76.78

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        429.12        0.0500
                  37.54        428.86        0.0500
                  53.31        428.70        0.0500
                  81.17        428.24        0.0500
                  99.28        428.15    0.0500 /0.0300  Main Channel
                 114.53        427.72        0.0300      Main Channel
                 119.88        426.51        0.0300      Main Channel
                 124.17        425.84        0.0300      Main Channel
                 206.01        425.90        0.0300      Main Channel
                 209.64        426.51        0.0300      Main Channel
                 214.21        426.89        0.0300      Main Channel
                 231.49        427.17        0.0300      Main Channel
                 268.61        427.89    0.0300 /0.0500  Main Channel
                 351.58        428.15        0.0500
                 368.27        428.31        0.0500
```

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                405.75        428.52        0.0500
                416.79        428.59        0.0500
                440.06        428.76        0.0500
                469.88        428.97        0.0500

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.16  426.00    .187E+04       9.2         0.88       3.40
       0.31  426.16    .424E+04      35.4         1.49       2.00
       0.47  426.32    .666E+04      74.1         1.98       1.50
       0.63  426.47    .914E+04     123.7         2.41       1.23
       0.79  426.63    .117E+05     182.8         2.79       1.07
       0.94  426.79    .143E+05     251.2         3.13       0.95
       1.10  426.95    .170E+05     323.1         3.39       0.88
       1.26  427.10    .199E+05     394.0         3.52       0.84
       1.42  427.26    .232E+05     479.1         3.69       0.81
       1.57  427.42    .267E+05     577.3         3.86       0.77
       1.73  427.58    .304E+05     687.4         4.03       0.74
       1.89  427.73    .344E+05     808.6         4.20       0.71
       2.05  427.89    .387E+05     927.4         4.28       0.70
       2.23  428.07    .449E+05    1119.2         4.45       0.67
       2.41  428.25    .531E+05    1356.2         4.56       0.65
       2.59  428.43    .627E+05    1638.9         4.66       0.64
       2.77  428.61    .737E+05    1955.8         4.73       0.63
       2.95  428.79    .859E+05    2310.2         4.79       0.62
       3.13  428.97    .996E+05    2701.5         4.84       0.61

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)    36.38     1.86    6.33  76.78      0.03      0.88
   OUTFLOW: ID= 1 (******)    36.38     1.84    6.33  76.78      0.03      0.88


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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):   125.79  22.154     6.33    82.37
      + ID2= 2 (******):    36.38   1.840     6.33    76.78
        ================================================
        ID = 3 (******):   162.16  23.994     6.33    81.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.98         3.60
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.91         1.12
     Length            (m)=     246.54       157.18
     Mannings n           =      0.015        0.300

     Max.Eff.Inten.(mm/hr)=     135.12        74.92
                   over (min)        5.00        30.00
     Storage Coeff.  (min)=       4.36 (ii)   28.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.23         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.83         0.43       2.062 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.42        6.08
     RUNOFF VOLUME    (mm)=     100.36        67.13       86.40
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.66        0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     8.58   2.062     6.08    86.40
      + ID2= 2 (******):    14.98   1.412     6.58    76.44
        ================================================
        ID = 3 ( 50650):    23.56   3.166     6.08    80.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50650):    23.56   3.166     6.08    80.07
      + ID2= 2 (******):   162.16  23.994     6.33    81.11
        ================================================
        ID = 1 ( 50650):   185.72  26.039     6.33    80.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00        129.45        0.0450
                  6.00        129.24        0.0450
                  8.00        128.92        0.0450
                 10.00        128.26        0.0450
                 12.00        127.37        0.0450
                 14.00        126.79        0.0450
                 16.00        126.20        0.0450
                 18.00        125.80        0.0450
                 21.00        125.29        0.0450
                 24.00        124.85        0.0450
                 27.00        124.54        0.0350      Main Channel
                 30.00        124.62        0.0350      Main Channel
                 33.00        124.84    0.0350 /0.0450  Main Channel
                 36.00        125.26        0.0450
                 39.00        125.86        0.0450
                 42.00        126.49        0.0450
                 48.00        128.97        0.0450
                 54.00        129.42        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.26  124.80    .390E+03       0.9         0.76       7.18
       0.51  125.06    .124E+04       4.9         1.29       4.21
       0.77  125.31    .239E+04      12.3         1.67       3.25
       1.03  125.57    .380E+04      23.2         1.99       2.73
       1.28  125.83    .544E+04      37.9         2.27       2.40
       1.54  126.08    .731E+04      56.6         2.52       2.15
       1.80  126.34    .937E+04      79.6         2.77       1.96
       2.05  126.60    .116E+05     107.2         3.01       1.81
       2.31  126.85    .140E+05     139.3         3.25       1.67
       2.57  127.11    .165E+05     175.4         3.47       1.57
       2.82  127.37    .191E+05     215.7         3.68       1.48
       3.08  127.62    .219E+05     261.1         3.89       1.39
       3.34  127.88    .247E+05     310.7         4.10       1.32
       3.59  128.14    .276E+05     364.3         4.30       1.26
       3.85  128.40    .307E+05     421.6         4.48       1.21
       4.11  128.65    .338E+05     482.7         4.65       1.17
       4.36  128.91    .371E+05     548.1         4.82       1.13
       4.62  129.17    .406E+05     600.9         4.83       1.13
       4.88  129.42    .446E+05     634.1         4.63       1.17

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)    14.98     1.41    6.58  76.44      0.03      0.87
   OUTFLOW: ID= 1 (******)    14.98     1.41    6.58  76.44      0.03      0.87


--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    23.56   3.166     6.08    80.07
      + ID2= 2 (******):   162.16  23.994     6.33    81.11
        ================================================
        ID = 3 ( 50650):   185.72  26.039     6.33    80.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00        129.45        0.0450
                  6.00        129.24        0.0450
                  8.00        128.92        0.0450
                 10.00        128.26        0.0450
                 12.00        127.37        0.0450
                 14.00        126.79        0.0450
                 16.00        126.20        0.0450
                 18.00        125.80        0.0450
                 21.00        125.29        0.0450
                 24.00        124.85        0.0450
                 27.00        124.54        0.0350      Main Channel
                 30.00        124.62        0.0350      Main Channel
                 33.00        124.84    0.0350 /0.0450  Main Channel
                 36.00        125.26        0.0450
                 39.00        125.86        0.0450
                 42.00        126.49        0.0450
                 48.00        128.97        0.0450
                 54.00        129.42        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.26  124.80    .390E+03       0.9         0.76       7.18
       0.51  125.06    .124E+04       4.9         1.29       4.21
       0.77  125.31    .239E+04      12.3         1.67       3.25
       1.03  125.57    .380E+04      23.2         1.99       2.73
       1.28  125.83    .544E+04      37.9         2.27       2.40
       1.54  126.08    .731E+04      56.6         2.52       2.15
       1.80  126.34    .937E+04      79.6         2.77       1.96
       2.05  126.60    .116E+05     107.2         3.01       1.81
       2.31  126.85    .140E+05     139.3         3.25       1.67
       2.57  127.11    .165E+05     175.4         3.47       1.57
       2.82  127.37    .191E+05     215.7         3.68       1.48
       3.08  127.62    .219E+05     261.1         3.89       1.39
       3.34  127.88    .247E+05     310.7         4.10       1.32
       3.59  128.14    .276E+05     364.3         4.30       1.26
       3.85  128.40    .307E+05     421.6         4.48       1.21
       4.11  128.65    .338E+05     482.7         4.65       1.17
       4.36  128.91    .371E+05     548.1         4.82       1.13
       4.62  129.17    .406E+05     600.9         4.83       1.13
       4.88  129.42    .446E+05     634.1         4.63       1.17

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)    36.38     1.86    6.33  76.78      0.03      0.88
   OUTFLOW: ID= 1 (******)    36.38     1.84    6.33  76.78      0.03      0.88


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--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.06        13.71
     Dep. Storage     (mm)=       2.00         6.10
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     581.73        82.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     135.12        94.56
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       6.29 (ii)   19.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.19         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=      12.88         1.88      14.222 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.25        6.08
     RUNOFF VOLUME    (mm)=     100.36        58.31       88.59
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.57        0.87

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40670):    50.76  14.222     6.08    88.59
      + ID2= 2 ( 60650):   185.72  25.972     6.33    80.98
        ================================================
        ID = 3 ( 50670):   236.49  30.678     6.33    82.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00        115.77        0.0450
                 20.00        115.51        0.0450
                 24.00        114.73        0.0450
                 28.00        113.17    0.0450 /0.0350  Main Channel
                 32.00        113.16    0.0350 /0.0450  Main Channel
                 36.00        114.68        0.0450
                 40.00        115.05        0.0450
                 44.00        115.27        0.0450
                 48.00        115.46        0.0450
                 52.00        115.71        0.0450
                 54.00        115.77        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.14  113.30    .275E+03       0.3         0.60      13.60
       0.27  113.43    .612E+03       1.2         0.93       8.76
       0.41  113.57    .996E+03       2.4         1.18       6.88
       0.55  113.71    .143E+04       4.1         1.39       5.85
       0.69  113.84    .191E+04       6.1         1.57       5.18
       0.82  113.98    .244E+04       8.6         1.73       4.70
       0.96  114.12    .301E+04      11.6         1.87       4.34
       1.10  114.26    .363E+04      14.9         2.00       4.06
       1.24  114.39    .430E+04      18.8         2.12       3.82
       1.37  114.53    .502E+04      23.1         2.24       3.63
       1.51  114.67    .579E+04      27.9         2.34       3.46
       1.65  114.81    .664E+04      32.5         2.38       3.41
       1.78  114.94    .763E+04      37.8         2.41       3.36
       1.92  115.08    .878E+04      44.0         2.44       3.33
       2.06  115.22    .101E+05      50.8         2.45       3.31
       2.20  115.35    .117E+05      58.8         2.46       3.30
       2.33  115.49    .134E+05      68.1         2.47       3.29
       2.47  115.63    .157E+05      74.2         2.30       3.53
       2.61  115.77    .188E+05      85.0         2.20       3.69

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50670)    236.49    30.68    6.33  82.61      1.59      2.37
   OUTFLOW: ID= 1 ( 60670)    236.49    30.12    6.33  82.61      1.58      2.36


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.22         4.63
     Dep. Storage     (mm)=       2.00         8.04
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     269.03        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     135.12       102.91
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.48 (ii)   12.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.23         0.83       2.960 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17        6.08
     RUNOFF VOLUME    (mm)=     100.36        58.85       81.73
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.57        0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40700):    10.86   2.960     6.08    81.73
      + ID2= 2 ( 60670):   236.49  30.124     6.33    82.61
        ================================================
        ID = 3 ( 50680):   247.34  31.047     6.33    82.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
```

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---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50         0.69
     Dep. Storage     (mm)=       2.00         7.98
     Average Slope     (%)=       0.60         0.60
     Length            (m)=      89.27        69.00
     Mannings n          =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     135.12        79.20
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       2.69 (ii)   21.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.29         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.09          0.228 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=     100.36        57.96          74.45
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.57           0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       7.93        17.56
     Dep. Storage     (mm)=       2.00         8.01
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     412.26        40.00
     Mannings n          =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     135.12        97.93
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.11 (ii)   11.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.24         0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.59         3.06          5.282 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17           6.08
     RUNOFF VOLUME    (mm)=     100.36        55.87          68.10
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.55           0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40680):     1.20    0.228     6.08    74.45
     + ID2= 2 ( 40690):    25.49    5.282     6.08    68.10
       ==================================================
       ID = 3 ( 50690):    26.69    5.510     6.08    68.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50680):   247.34   31.047     6.33    82.57
     + ID2= 2 ( 50690):    26.69    5.510     6.08    68.39
       ==================================================
       ID = 3 ( 50700):   274.03   33.695     6.33    81.19

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         109.54        0.0450
                  4.00         108.85        0.0450
                  8.00         108.76        0.0450
                 12.00         108.31        0.0450
                 16.00         107.44        0.0450
                 20.00         107.22        0.0450
                 24.00         107.06        0.0450
                 28.00         107.10        0.0450
                 32.00         107.04        0.0450
                 36.00         106.98        0.0450
                 40.00         106.83        0.0350      Main Channel
                 44.00         106.49        0.0350      Main Channel
                 48.00         106.92    0.0350 /0.0450  Main Channel
                 52.00         107.19        0.0450
                 56.00         107.11        0.0450
                 60.00         107.14        0.0450
                 64.00         107.27        0.0450
                 68.00         107.71        0.0450
                 72.00         108.37        0.0450
                 80.00         109.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   106.60    .128E+03       0.1         0.43      35.47
        0.23   106.72    .513E+03       0.4         0.69      22.34
        0.35   106.83    .115E+04       1.1         0.90      17.05
        0.52   107.00    .277E+04       3.6         1.21      12.69
        0.69   107.17    .675E+04       8.9         1.21      12.64
        0.86   107.34    .135E+05      19.9         1.35      11.35
        1.02   107.51    .211E+05      36.3         1.58       9.70
        1.19   107.68    .291E+05      57.8         1.82       8.39
        1.36   107.85    .375E+05      84.0         2.06       7.43
        1.53   108.02    .461E+05     114.5         2.28       6.71
        1.70   108.19    .550E+05     149.1         2.49       6.15
        1.87   108.35    .642E+05     187.4         2.68       5.71
        2.04   108.52    .737E+05     228.8         2.85       5.37
        2.21   108.69    .837E+05     274.1         3.01       5.09
        2.37   108.86    .942E+05     316.2         3.08       4.97
        2.54   109.03    .105E+06     372.6         3.25       4.72
        2.71   109.20    .117E+06     433.4         3.40       4.50
        2.88   109.37    .129E+06     498.6         3.55       4.31
        3.05   109.54    .141E+06     568.2         3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  274.03    33.70    6.33  81.19      1.00      1.54
   OUTFLOW: ID= 1 ( 60700)  274.03    32.32    6.42  81.19      0.98      1.52


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---------------------
| CALIB             |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94

     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n          =      0.015        0.360

     Max.Eff.Inten.(mm/hr)=     135.12        99.34
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.53 (ii)    9.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.11
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.49         0.95          1.447 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        56.38          65.51
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.55           0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40710):     6.35    1.447     6.08    65.51
     + ID2= 2 ( 60700):   274.03   32.319     6.42    81.19
       ==================================================
       ID = 3 ( 50710):   280.38   32.743     6.42    80.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n          =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     135.12       101.93
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.13 (ii)    7.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.24         0.14
                                                        *TOTALS*
     PEAK FLOW       (cms)=       7.73         0.91          8.634 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        59.67          93.71
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.58           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.7080      1.0040
                           0.2890      0.3890   |    0.7750      1.0700
                           0.3270      0.4500   |    0.9210      1.2580
                           0.3600      0.6030   |    1.0000      1.3280
                           0.3900      0.6540   |    1.0820      1.3980
                           0.4190      0.7110   |    1.1670      1.4690
                           0.4450      0.7680   |    1.2550      1.5390
                           0.4700      0.8260   |    1.3460      1.6090
                           0.4960      0.8830   |    1.9470      1.9930
                           0.6450      0.9400   |    0.0000      0.0000

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037     8.634      6.08       93.71
   OUTFLOW: ID= 1 ( 70150)     25.037     1.060      6.58       93.70
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00        0.00

                   TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                   CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                   PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.28
                   TIME SHIFT OF PEAK FLOW          (min)= 30.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  1.3826

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  --------------------------
  | Junction Command(70151) |
  --------------------------

                               AREA     QPEAK   TPEAK     R.V.
                               (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3( 70150)     0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70151)     0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n          =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     135.12        98.50
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.45 (ii)    7.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       3.95         0.75          4.700 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        57.35          89.61
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.56           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.2230      0.3310
                           0.0580      0.0840   |    0.2500      0.3590
                           0.0780      0.1040   |    0.2790      0.3870
```

```
                          0.0930      0.1240   |    0.3090      0.4160
                          0.1060      0.1440   |    0.3750      0.4780
                          0.1180      0.1640   |    0.4110      0.5120
                          0.1280      0.1840   |    0.4470      0.5450
                          0.1590      0.2550   |    0.5250      0.6130
                          0.1770      0.2790   |    0.7390      0.9130
                          0.1990      0.3030   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155      4.700      6.08      89.61
   OUTFLOW: ID= 1 ( 70160)     14.155      0.610      6.58      89.58
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.97
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7332
```

Junction Command(70161)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 3(70160)	0.00	0.00	0.00	0.00
OUTFLOW: ID= 2(70161)	0.00	0.00	0.00	0.00

ADD HYD (50730)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50710):	280.38	32.743	6.42	80.84
+ ID2= 2 (70150):	25.04	1.060	6.58	93.70
ID = 3 (50730):	305.42	33.786	6.42	81.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50730)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50730):	305.42	33.786	6.42	81.89
+ ID2= 2 (70151):	0.00	0.000	0.00	0.00
ID = 1 (50730):	305.42	33.786	6.42	81.89

*** W A R N I N G : HYDROGRAPH 70151 <ID= 2> IS DRY.
*** W A R N I N G : HYDROGRAPH 0001 = HYDROGRAPH 0003

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50730)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50730):	305.42	33.786	6.42	81.89
+ ID2= 2 (70160):	14.15	0.610	6.58	89.58
ID = 3 (50730):	319.58	34.391	6.42	82.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50730)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50730):	319.58	34.391	6.42	82.23
+ ID2= 2 (70161):	0.00	0.000	0.00	0.00
ID = 1 (50730):	319.58	34.391	6.42	82.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60730)

IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	96.28	0.0450	
9.00	95.39	0.0450	
12.00	94.87	0.0450	
15.00	94.17	0.0450	
18.00	93.95	0.0450	
21.00	94.01	0.0450	
24.00	93.92	0.0450	
27.00	93.98	0.0450 /0.0350	Main Channel
30.00	93.33	0.0350	Main Channel
32.00	93.73	0.0350 /0.0450	Main Channel
34.00	94.58	0.0450	
35.00	95.06	0.0450	
40.00	95.32	0.0450	
45.00	96.12	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	93.46	.164E+03	0.0	0.36	89.51
0.26	93.60	.654E+03	0.2	0.57	56.39
0.40	93.73	.147E+04	0.6	0.75	43.03
0.55	93.88	.274E+04	1.4	0.99	32.63
0.70	94.03	.550E+04	2.8	1.00	32.28
0.85	94.18	.104E+05	5.8	1.08	29.94
1.00	94.33	.159E+05	10.1	1.24	26.04
1.15	94.48	.216E+05	15.6	1.41	22.97
1.29	94.63	.275E+05	22.2	1.57	20.64
1.44	94.78	.338E+05	29.9	1.72	18.84
1.59	94.93	.404E+05	38.6	1.86	17.44
1.74	95.08	.473E+05	48.0	1.97	16.40
1.89	95.23	.549E+05	58.1	2.05	15.76
2.04	95.38	.637E+05	70.1	2.14	15.14
2.19	95.53	.731E+05	83.0	2.21	14.67
2.34	95.68	.833E+05	97.5	2.27	14.23
2.49	95.83	.941E+05	113.5	2.34	13.82
2.64	95.98	.106E+06	131.2	2.41	13.42
2.79	96.13	.118E+06	150.7	2.48	13.05

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50730)	319.58	34.39	6.42	82.23	1.52	1.79
OUTFLOW: ID= 1 (60730)	319.58	29.72	6.67	82.23	1.44	1.71

CALIB / STANDHYD (40770) ID= 1 DT= 5.0 min

Area (ha)= 69.43 Total Imp(%)= 81.00 Dir. Conn.(%)= 80.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	56.24	13.19
Dep. Storage (mm)=	2.00	5.50
Average Slope (%)=	1.70	1.70
Length (m)=	680.34	43.00
Mannings n =	0.015	0.270
Max.Eff.Inten.(mm/hr)=	135.12	101.90
over (min)	5.00	15.00
Storage Coeff. (min)=	6.65 (ii)	10.69 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.18	0.09

	TOTALS
PEAK FLOW (cms)=	21.628 (iii)
TIME TO PEAK (hrs)=	6.08
RUNOFF VOLUME (mm)=	92.13
TOTAL RAINFALL (mm)=	102.36
RUNOFF COEFFICIENT =	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(70170) OVERFLOW IS ON

IN= 2---> OUT= 1 | DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	3.6700	4.7800
0.2600	1.6200	8.6400	6.0000
1.4500	2.7100	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (40770)	69.429	21.628	6.08	92.13
OUTFLOW: ID= 1 (70170)	69.429	2.922	6.67	92.11
OVERFLOW:ID= 3 (0003)	0.000	0.000	0.00	0.00

TOTAL NUMBER OF SIMULATION OVERFLOW = 0
CUMULATIVE TIME OF OVERFLOW (HOURS) = 0.00
PERCENTAGE OF TIME OVERFLOWING (%) = 0.00

PEAK FLOW REDUCTION [Qout/Qin](%)= 13.51
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 4.0848

Junction Command(70171)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 3(70170)	0.00	0.00	0.00	0.00
OUTFLOW: ID= 2(70171)	0.00	0.00	0.00	0.00

ADD HYD (50770)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (60730):	319.58	29.718	6.67	82.23
+ ID2= 2 (70170):	69.43	2.922	6.67	92.11
ID = 3 (50770):	389.01	32.641	6.67	83.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50770)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50770):	389.01	32.641	6.67	83.99
+ ID2= 2 (70171):	0.00	0.000	0.00	0.00
ID = 1 (50770):	389.01	32.641	6.67	83.99

*** W A R N I N G : HYDROGRAPH 70171 <ID= 2> IS DRY.
*** W A R N I N G : HYDROGRAPH 0001 = HYDROGRAPH 0003

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60770)

IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	92.38	0.0450	
3.00	90.34	0.0450	
6.00	89.94	0.0450	
9.00	89.83	0.0450	
12.00	89.80	0.0450	
15.00	89.72	0.0450	
18.00	89.58	0.0450 /0.0350	Main Channel
21.00	89.15	0.0350	Main Channel
24.00	89.82	0.0350 /0.0450	Main Channel
27.00	89.76	0.0450	
30.00	89.78	0.0450	
33.00	89.79	0.0450	
36.00	89.80	0.0450	
39.00	89.72	0.0450	
42.00	90.35	0.0450	
45.00	91.36	0.0450	
48.00	92.10	0.0450	
51.00	92.21	0.0450	
54.00	92.34	0.0450	
56.00	92.35	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.15	89.29	.298E+02	0.0	0.31	13.27
0.29	89.44	.119E+03	0.2	0.50	8.36
0.44	89.58	.268E+03	0.7	0.65	6.38
0.61	89.76	.588E+03	1.9	0.79	5.25
0.78	89.93	.179E+04	5.1	0.71	5.86
0.96	90.10	.329E+04	11.4	0.87	4.79
1.13	90.27	.489E+04	20.2	1.03	4.03
1.30	90.45	.656E+04	31.5	1.19	3.47
1.47	90.62	.828E+04	45.0	1.35	3.06
1.65	90.79	.100E+05	60.5	1.50	2.76
1.82	90.97	.118E+05	77.9	1.64	2.53
1.99	91.14	.136E+05	97.1	1.77	2.34
2.17	91.31	.155E+05	118.1	1.90	2.18
2.34	91.48	.173E+05	140.6	2.02	2.06
2.51	91.66	.193E+05	164.7	2.13	1.95
2.68	91.83	.212E+05	190.5	2.23	1.86
2.86	92.00	.232E+05	218.0	2.33	1.78
3.03	92.18	.253E+05	242.7	2.39	1.74
3.20	92.35	.275E+05	262.6	2.37	1.75

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50770)	389.01	32.64	6.67	83.99	1.32	1.21
OUTFLOW: ID= 1 (60770)	389.01	32.60	6.67	83.99	1.32	1.21

CALIB / STANDHYD (40780) ID= 1 DT= 5.0 min

Area (ha)= 24.57 Total Imp(%)= 52.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	12.78	11.79
Dep. Storage (mm)=	2.00	8.70
Average Slope (%)=	1.50	1.50
Length (m)=	404.74	43.00
Mannings n =	0.015	0.330
Max.Eff.Inten.(mm/hr)=	135.12	96.11
over (min)	5.00	15.00
Storage Coeff. (min)=	5.06 (ii)	14.70 (ii)

```
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.21         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.46         1.83         6.040 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.17          6.08
      RUNOFF VOLUME    (mm)=     100.36        55.10         77.73
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.54          0.76

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.6    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40780):    24.57   6.040     6.08    77.73
      + ID2= 2 ( 60770):   389.01  32.599     6.67    83.99
        ====================================================
        ID = 3 ( 50780):   413.58  33.707     6.67    83.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.38         2.81
      Dep. Storage     (mm)=       2.00         5.74
      Average Slope     (%)=       1.20         1.20
      Length            (m)=     233.56        52.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=     135.12       105.97
                   over (min)       5.00        15.00
      Storage Coeff.  (min)=       3.89 (ii)   13.74 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.25         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.90         0.50         2.344 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.17          6.08
      RUNOFF VOLUME    (mm)=     100.36        59.77         85.26
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.58          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       4.66         0.49
      Dep. Storage     (mm)=       2.00         7.60
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     185.29        48.00
      Mannings n           =      0.015        0.330

      Max.Eff.Inten.(mm/hr)=     135.12        93.87
                   over (min)       5.00        10.00
      Storage Coeff.  (min)=       3.23 (ii)    6.98 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.27         0.14
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.73         0.10         1.838 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.08          6.08
      RUNOFF VOLUME    (mm)=     100.36        55.25         95.94
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.54          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40790):     8.18   2.344     6.08    85.26
      + ID2= 2 ( 40800):     5.15   1.838     6.08    95.94
        ====================================================
        ID = 3 ( 50795):    13.33   4.181     6.08    89.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7780      0.6570
                          0.0040      0.0150   |    1.1550      0.7720
                          0.0090      0.0810   |    1.5780      0.8930
                          0.0120      0.1550   |    1.9240      0.9870
                          0.0140      0.2370   |    2.4190      1.1190
                          0.0160      0.3260   |    2.9510      1.2560
                          0.0620      0.3720   |    3.5980      1.3270
                          0.2560      0.4700   |    4.5570      1.3990
                          0.5310      0.5740   |    5.7230      1.4730

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332     4.181      6.08      89.38
   OUTFLOW: ID= 1 ( 70180)     13.332     0.914      6.33      89.31
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.87
                  TIME SHIFT OF PEAK FLOW         (min)= 15.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6993

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  --------------------------
  | Junction Command(70181) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.41         2.16
      Dep. Storage     (mm)=       1.00         1.50
      Average Slope     (%)=       1.00         2.00
      Length            (m)=     154.27        40.00
      Mannings n           =      0.013        0.250

      Max.Eff.Inten.(mm/hr)=     135.12       120.63
                   over (min)       5.00        10.00
      Storage Coeff.  (min)=       2.94 (ii)    9.49 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.28         0.12
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.46         0.55         1.014 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.08          6.08
      RUNOFF VOLUME    (mm)=     101.36        71.54         81.89
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.99         0.70          0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40805):     3.57   1.014     6.08    81.89
      + ID2= 2 ( 70180):    13.33   0.914     6.33    89.31
        ====================================================
        ID = 3 ( 50790):    16.90   1.632     6.08    87.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50790):    16.90   1.632     6.08    87.74
      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 1 ( 50790):    16.90   1.632     6.08    87.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50780):   413.58  33.707     6.67    83.62
      + ID2= 2 ( 50790):    16.90   1.632     6.08    87.74
        ====================================================
        ID = 3 ( 50800):   430.48  34.715     6.67    83.78

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         88.54        0.0450
                    3.00         88.18        0.0450
                    6.00         87.54        0.0450
                    9.00         87.44        0.0450
                   12.00         87.13        0.0450
                   15.00         87.23        0.0450
                   18.00         87.18        0.0450
                   21.00         86.49    0.0450 /0.0350  Main Channel
                   24.00         85.82        0.0350      Main Channel
                   27.00         86.44    0.0350 /0.0450  Main Channel
                   30.00         87.18        0.0450
                   33.00         87.16        0.0450
                   36.00         87.25        0.0450
                   39.00         87.46        0.0450
                   42.00         87.70        0.0450
                   45.00         87.80        0.0450
                   48.00         88.00        0.0450
                   49.00         88.12        0.0450
                   50.00         88.23        0.0450
                   52.00         88.59        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.12     85.95    .779E+02       0.0         0.37       48.75
        0.25     86.07    .312E+03       0.2         0.59       30.71
        0.37     86.19    .701E+03       0.5         0.77       23.44
        0.49     86.32    .125E+04       1.1         0.94       19.35
        0.62     86.44    .195E+04       1.9         1.09       16.67
        0.77     86.59    .299E+04       3.8         1.36       13.29
        0.92     86.74    .424E+04       6.2         1.59       11.42
        1.07     86.89    .570E+04       9.3         1.77       10.25
        1.22     87.04    .736E+04      13.0         1.92        9.44
        1.37     87.19    .938E+04      16.8         1.94        9.33
        1.52     87.34    .134E+05      22.9         1.86        9.74
        1.66     87.49    .182E+05      31.1         1.86        9.72
        1.81     87.64    .237E+05      41.6         1.91        9.51
        1.96     87.79    .298E+05      53.9         1.96        9.22
        2.11     87.94    .365E+05      68.9         2.05        8.84
        2.26     88.09    .437E+05      86.5         2.15        8.43
        2.41     88.24    .513E+05     106.2         2.25        8.04
        2.56     88.39    .592E+05     128.2         2.36        7.69
        2.71     88.54    .674E+05     152.5         2.46        7.36

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  430.48    34.72     6.67   83.78      1.72      1.88
   OUTFLOW: ID= 1 ( 60800)  430.48    32.97     6.83   83.78      1.69      1.87


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--------------------
| CALIB            |
| STANDHYD ( 40820)|   Area    (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.98        11.23
      Dep. Storage     (mm)=       2.00         9.57
      Average Slope     (%)=       2.30         2.30
      Length            (m)=     307.74        44.00
      Mannings n           =      0.015        0.390

      Max.Eff.Inten.(mm/hr)=     135.12        92.58
                   over (min)       5.00        15.00
      Storage Coeff.  (min)=       3.77 (ii)   13.42 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.25         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.68         1.73         2.174 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.17          6.08
      RUNOFF VOLUME    (mm)=     100.36        50.04         56.57
      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
      RUNOFF COEFFICIENT   =       0.98         0.49          0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.
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        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  73.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40820):    14.21   2.174     6.08    56.57
      + ID2= 2 ( 60800):   430.48  32.967     6.83    83.78
        ================================================
        ID = 3 ( 50820):   444.68  33.431     6.83    82.91

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50500):  1406.24  77.592     6.92    67.15
      + ID2= 2 ( 50820):   444.68  33.431     6.83    82.91
        ================================================
        ID = 3 ( 50830):  1850.93 111.016     6.83    70.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         82.12        0.0450
                  20.00         81.53        0.0450
                  24.00         81.26        0.0450
                  28.00         81.27        0.0450
                  32.00         80.34    0.0450 /0.0350  Main Channel
                  36.00         79.95        0.0350      Main Channel
                  40.00         80.78        0.0450
                  44.00         81.45        0.0450
                  48.00         81.53        0.0450
                  52.00         81.49        0.0450
                  56.00         81.51        0.0450
                  60.00         81.58        0.0450
                  64.00         81.58        0.0450
                  68.00         81.61        0.0450
                  72.00         81.75        0.0450
                  80.00         82.07        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   80.05    .555E+01        0.0         0.24       5.45
        0.19   80.14    .222E+02        0.1         0.38       3.43
        0.29   80.24    .499E+02        0.3         0.50       2.62
        0.39   80.34    .888E+02        0.7         0.60       2.16
        0.50   80.45    .146E+03        1.4         0.77       1.68
        0.62   80.57    .213E+03        2.5         0.91       1.43
        0.73   80.68    .290E+03        3.8         1.02       1.27
        0.85   80.80    .375E+03        5.4         1.13       1.15
        0.96   80.91    .471E+03        7.6         1.26       1.03
        1.08   81.03    .578E+03       10.1         1.37       0.95
        1.19   81.14    .695E+03       13.0         1.46       0.89
        1.31   81.26    .823E+03       16.2         1.53       0.85
        1.43   81.37    .100E+04       19.7         1.53       0.85
        1.54   81.49    .121E+04       24.1         1.56       0.84
        1.66   81.60    .155E+04       29.0         1.46       0.89
        1.77   81.72    .204E+04       36.4         1.39       0.93
        1.89   81.84    .259E+04       45.6         1.38       0.95
        2.00   81.95    .320E+04       56.7         1.38       0.94
        2.12   82.07    .387E+04       69.6         1.40       0.93

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1850.93   111.02    6.83  70.94      2.10      1.40
   OUTFLOW: ID= 1 ( 60830) 1850.93   110.92    6.83  70.94      2.10      1.40


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--------------------
| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36        15.15
     Dep. Storage     (mm)=       2.00         5.54
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     550.83        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     135.12       146.98
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       6.35 (ii)   13.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.19         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       8.56         3.84       11.962 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17        6.08
     RUNOFF VOLUME    (mm)=     100.36        65.35       84.06
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.64        0.82


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         1.59
     Dep. Storage     (mm)=       2.00         9.61
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     116.69        69.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=     135.12        89.71
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       1.91 (ii)   13.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.32         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.25        0.331 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17        6.08
     RUNOFF VOLUME    (mm)=     100.36        51.59       58.63
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.50        0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  75.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40840):    45.51  11.962     6.08    84.06
      + ID2= 2 ( 40840):     2.04   0.331     6.08    58.63
        ================================================
        ID = 3 ( 50840):    47.56  12.293     6.08    82.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56  12.293     6.08    82.97
      + ID2= 2 ( 60830):  1850.93 110.915     6.83    70.94
        ================================================
        ID = 1 ( 50840):  1898.48 112.486     6.83    71.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         82.18        0.0450
                  32.00         79.04        0.0450
                  40.00         78.76        0.0450
                  48.00         78.58        0.0450
                  56.00         78.21        0.0450
                  64.00         76.89        0.0350      Main Channel
                  72.00         78.08        0.0450
                  80.00         79.44        0.0450
                  88.00         80.28        0.0450
                  96.00         80.92        0.0450
                 104.00         81.29        0.0450
                 112.00         81.62        0.0450
                 120.00         81.76        0.0450
                 128.00         81.81        0.0450
                 140.00         82.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27   77.16    .320E+03        0.2         0.48      24.00
        0.54   77.43    .128E+04        1.4         0.75      15.12
        0.81   77.70    .288E+04        4.2         0.99      11.54
        1.08   77.97    .512E+04        9.0         1.20       9.53
        1.35   78.24    .799E+04       16.6         1.42       8.02
        1.62   78.51    .119E+05       26.9         1.54       7.40
        1.89   78.78    .176E+05       41.0         1.59       7.15
        2.16   79.05    .252E+05       62.9         1.71       6.68
        2.43   79.32    .341E+05       93.9         1.89       6.05
        2.70   79.59    .438E+05      131.1         2.05       5.56
        2.97   79.86    .544E+05      175.1         2.20       5.18
        3.24   80.13    .660E+05      226.4         2.35       4.86
        3.51   80.40    .787E+05      284.9         2.48       4.60
        3.77   80.67    .924E+05      351.1         2.60       4.39
        4.04   80.94    .107E+06      425.7         2.72       4.20
        4.31   81.21    .124E+06      507.1         2.81       4.06
        4.58   81.48    .141E+06      598.4         2.90       3.94
        4.85   81.75    .161E+06      695.9         2.96       3.86
        5.12   82.02    .185E+06      800.9         2.97       3.85

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 1898.48   112.49    6.83  71.24      2.56      1.97
   OUTFLOW: ID= 1 ( 60840) 1898.48   111.72    6.92  71.24      2.55      1.96


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--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14        18.19
     Dep. Storage     (mm)=       2.00         7.29
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     418.93       142.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=     135.12        78.94
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       4.74 (ii)   23.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.22         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.37         2.21        3.693 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.33        6.08
     RUNOFF VOLUME    (mm)=     100.36        56.13       67.02
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.55        0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33   3.693     6.08    67.02
      + ID2= 2 ( 60840):  1898.48 111.719     6.92    71.24
        ================================================
        ID = 3 ( 50850):  1924.81 112.915     6.92    71.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77        35.37
     Dep. Storage     (mm)=       2.00         8.79
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     611.77       120.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=     135.12        67.11
                   over (min)       5.00        30.00
     Storage Coeff.  (min)=       6.76 (ii)   28.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.18         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       6.64         3.75        8.567 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08        6.08
     RUNOFF VOLUME    (mm)=     100.36        56.97       71.72
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.56        0.70


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
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      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         85.55        0.0450
                  24.00         85.23        0.0450
                  28.00         85.17        0.0450
                  32.00         85.07        0.0450
                  36.00         84.96        0.0350      Main Channel
                  40.00         84.96        0.0350      Main Channel
                  44.00         85.00    0.0350 /0.0450  Main Channel
                  48.00         85.03        0.0450
                  52.00         85.18        0.0450
                  56.00         85.22        0.0450
                  60.00         85.31        0.0450
                  64.00         85.33        0.0450
                  68.00         85.38        0.0450
                  80.00         85.59        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.01    84.96    .992E+01       0.0         0.05     238.32
       0.04    84.99    .159E+03       0.0         0.21      57.53
       0.07    85.03    .408E+03       0.2         0.32      38.32
       0.10    85.06    .751E+03       0.4         0.40      30.54
       0.13    85.09    .114E+04       0.7         0.47      25.77
       0.16    85.12    .158E+04       1.2         0.53      22.66
       0.19    85.15    .206E+04       1.7         0.59      20.45
       0.22    85.18    .259E+04       2.3         0.64      18.91
       0.25    85.21    .321E+04       3.0         0.67      18.12
       0.29    85.24    .393E+04       3.8         0.70      17.32
       0.32    85.27    .473E+04       4.8         0.73      16.56
       0.35    85.30    .562E+04       5.9         0.76      15.89
       0.38    85.34    .663E+04       7.0         0.77      15.69
       0.41    85.37    .777E+04       8.5         0.80      15.20
       0.44    85.40    .902E+04      10.2         0.82      14.69
       0.47    85.43    .104E+05      12.2         0.85      14.19
       0.50    85.46    .118E+05      14.3         0.88      13.73
       0.53    85.49    .133E+05      16.7         0.91      13.31
       0.56    85.52    .150E+05      19.3         0.94      12.91

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40880)   56.14     8.57    6.08  71.72      0.41      0.80
   OUTFLOW: ID= 1 ( 60880)   56.14     5.72    6.17  71.70      0.34      0.76


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--------------------
|ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
| DT=  5.0 min     |     Length       (m)= 888.03
--------------------     Slope      (m/m)=  0.004
                         Manning n        =  0.013

     <------------------ TRAVEL TIME TABLE ---------------------->
       DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
        (m)      (cu.m.)      (cms)        (m/s)        min
       0.10     .213E+03       0.2          0.93        15.91
       0.20     .426E+03       0.7          1.41        10.53
       0.30     .639E+03       1.3          1.76         8.42
       0.40     .853E+03       2.0          2.04         7.25
       0.50     .107E+04       2.7          2.27         6.51
       0.60     .128E+04       3.6          2.47         5.99
       0.70     .149E+04       4.4          2.64         5.60
       0.80     .171E+04       5.4          2.79         5.30
       0.90     .192E+04       6.3          2.92         5.06
       1.00     .213E+04       7.3          3.04         4.87
       1.10     .234E+04       8.3          3.15         4.71
       1.20     .256E+04       9.3          3.24         4.57
       1.30     .277E+04      10.4          3.33         4.45
       1.40     .298E+04      11.4          3.40         4.35
       1.50     .320E+04      12.5          3.48         4.26
       1.60     .341E+04      13.6          3.54         4.18
       1.70     .362E+04      14.7          3.60         4.11
       1.80     .384E+04      15.8          3.66         4.05
       1.90     .405E+04      16.9          3.71         3.99

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60880)   56.14     5.72    6.17  71.70      0.84      2.84
   OUTFLOW: ID= 1 ( 80880)   56.14     5.56    6.33  71.70      0.82      2.82


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--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      18.24         23.47
     Dep. Storage     (mm)=       2.00          8.20
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     527.32         85.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     135.12         85.42
                  over (min)       5.00         25.00
     Storage Coeff.  (min)=       6.50 (ii)    23.80 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.18          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.80          3.07          6.641 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.33           6.08
     RUNOFF VOLUME    (mm)=     100.36         55.52          70.25
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.98          0.54           0.69

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  75.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40900)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.41          5.15
     Dep. Storage     (mm)=       1.00          7.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     300.67         43.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     135.12        141.11
                  over (min)       5.00         15.00
     Storage Coeff.  (min)=       4.78 (ii)    12.08 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.22          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.37          1.31          3.536 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17           6.08
     RUNOFF VOLUME    (mm)=     101.36         63.43          81.64
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.99          0.62           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
|DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------      (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  13.56      3.54      6.08   81.64
     ==========================================
     MAJOR SYS.(ID= 2):   3.32      2.58      6.08   81.64
     MINOR SYS.(ID= 3):  10.24      0.96      5.75   81.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71    6.641     6.08    70.25
      + ID2= 2 ( 50850):  1924.81  112.915     6.92    71.18
        ================================================
        ID = 3 ( 50890):  1966.52  114.713     6.92    71.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1966.52  114.713     6.92    71.16
      + ID2= 2 ( 80880):    56.14    5.562     6.33    71.70
        ================================================
        ID = 1 ( 50890):  2022.66  118.586     6.92    71.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  2022.66  118.586     6.92    71.18
      + ID2= 2 ( 90020):    10.24    0.960     5.75    81.64
        ================================================
        ID = 3 ( 50890):  2032.89  118.958     6.92    71.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         79.05        0.0450
                   2.00         78.40        0.0450
                   4.00         77.75        0.0450
                   6.00         77.16        0.0450
                   8.00         76.78        0.0450
                  10.00         76.65        0.0450
                  12.00         76.60        0.0450
                  14.00         76.58        0.0450
                  16.00         76.08        0.0450
                  18.00         75.49    0.0450 /0.0350  Main Channel
                  20.00         75.46        0.0350      Main Channel
                  22.00         75.52    0.0350 /0.0450  Main Channel
                  24.00         76.15        0.0450
                  26.00         76.44        0.0450
                  28.00         76.56        0.0450
                  30.00         76.68        0.0450
                  32.00         76.86        0.0450
                  34.00         77.01        0.0450
                  36.00         77.10        0.0450
                  40.00         79.16        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.03    75.49    .127E+02       0.0         0.14      32.03
       0.22    75.68    .231E+03       0.6         0.69       6.29
       0.40    75.87    .510E+03       2.0         1.01       4.28
       0.59    76.05    .849E+03       4.1         1.25       3.45
       0.78    76.24    .125E+04       6.9         1.43       3.02
       0.97    76.43    .175E+04      10.6         1.57       2.75
       1.15    76.62    .240E+04      14.6         1.57       2.75
       1.34    76.80    .343E+04      21.1         1.60       2.71
       1.53    76.99    .465E+04      30.1         1.68       2.58
       1.71    77.18    .605E+04      41.3         1.77       2.44
       1.90    77.36    .754E+04      55.7         1.92       2.26
       2.09    77.55    .908E+04      72.1         2.06       2.10
       2.27    77.74    .107E+05      90.6         2.20       1.96
       2.46    77.92    .123E+05     111.1         2.34       1.84
       2.65    78.11    .140E+05     133.5         2.48       1.74
       2.84    78.30    .157E+05     157.9         2.61       1.66
       3.02    78.49    .175E+05     184.1         2.73       1.58
       3.21    78.67    .193E+05     212.1         2.85       1.52
       3.40    78.86    .211E+05     242.1         2.97       1.46

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 2032.89   118.96    6.92  71.23      2.53      2.39
   OUTFLOW: ID= 1 ( 60900) 2032.89   119.03    6.92  71.23      2.52      2.39


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77          2.15
     Dep. Storage     (mm)=       2.00          7.07
     Average Slope     (%)=       1.70          1.70
     Length            (m)=     214.73         44.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     135.12        163.97
                  over (min)       5.00         15.00
     Storage Coeff.  (min)=       3.33 (ii)    10.22 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.26          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.36          0.68          1.977 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17           6.08
     RUNOFF VOLUME    (mm)=     100.36         67.04          84.67
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.98          0.65           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
```

```
07651>         ID1= 1 ( 40910):     6.92   1.977     6.08    84.67
07652>       + ID2= 2 ( 60900):  2032.89 119.035     6.92    71.23
07653>         ================================================
07654>         ID = 3 ( 50910):  2039.81 119.213     6.92    71.27
07655>
07656>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07657> ------------------------------------------------------------------------------
07658> --------------------
07659> | CALIB            |
07660> | NASHYD   (******)|   Area    (ha)=   0.19   Curve Number   (CN)= 85.0
07661> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
07662> --------------------   U.H. Tp(hrs)=   0.15
07663>
07664>      Unit Hyd Qpeak  (cms)=   0.048
07665>
07666>      PEAK FLOW       (cms)=   0.045 (i)
07667>      TIME TO PEAK    (hrs)=   6.083
07668>      RUNOFF VOLUME    (mm)=  66.747
07669>      TOTAL RAINFALL   (mm)= 102.360
07670>      RUNOFF COEFFICIENT   =   0.652
07671>
07672>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07673>
07674> ------------------------------------------------------------------------------
07675> --------------------
07676> | CALIB            |
07677> | NASHYD   (******)|   Area    (ha)=  17.88   Curve Number   (CN)= 85.0
07678> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
07679> --------------------   U.H. Tp(hrs)=   0.36
07680>
07681>      Unit Hyd Qpeak  (cms)=   1.897
07682>
07683>      PEAK FLOW       (cms)=   2.436 (i)
07684>      TIME TO PEAK    (hrs)=   6.333
07685>      RUNOFF VOLUME    (mm)=  67.123
07686>      TOTAL RAINFALL   (mm)= 102.360
07687>      RUNOFF COEFFICIENT   =   0.656
07688>
07689>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07690>
07691> ------------------------------------------------------------------------------
07692> --------------------
07693> | CALIB            |
07694> | NASHYD   (******)|   Area    (ha)=   0.44   Curve Number   (CN)= 85.0
07695> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
07696> --------------------   U.H. Tp(hrs)=   0.19
07697>
07698>      Unit Hyd Qpeak  (cms)=   0.088
07699>
07700>      PEAK FLOW       (cms)=   0.089 (i)
07701>      TIME TO PEAK    (hrs)=   6.167
07702>      RUNOFF VOLUME    (mm)=  66.979
07703>      TOTAL RAINFALL   (mm)= 102.360
07704>      RUNOFF COEFFICIENT   =   0.654
07705>
07706>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07707>
07708> ------------------------------------------------------------------------------
07709>
07710> --------------------
07711> | ADD HYD  (******)|
07712> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07713> --------------------          (ha)    (cms)    (hrs)     (mm)
07714>         ID1= 1 (******):    17.88   2.436     6.33    67.12
07715>       + ID2= 2 (******):     0.44   0.089     6.17    66.98
07716>         ================================================
07717>         ID = 3 (******):    18.32   2.507     6.25    67.12
07718>
07719>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07720> ------------------------------------------------------------------------------
07721> --------------------
07722> | CALIB            |
07723> | NASHYD   (******)|   Area    (ha)=   0.33   Curve Number   (CN)= 85.0
07724> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
07725> --------------------   U.H. Tp(hrs)=   0.18
07726>
07727>      Unit Hyd Qpeak  (cms)=   0.070
07728>
07729>      PEAK FLOW       (cms)=   0.069 (i)
07730>      TIME TO PEAK    (hrs)=   6.083
07731>      RUNOFF VOLUME    (mm)=  66.943
07732>      TOTAL RAINFALL   (mm)= 102.360
07733>      RUNOFF COEFFICIENT   =   0.654
07734>
07735>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07736>
07737> ------------------------------------------------------------------------------
07738> --------------------
07739> | CALIB            |
07740> | NASHYD   (******)|   Area    (ha)=   7.90   Curve Number   (CN)= 85.0
07741> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
07742> --------------------   U.H. Tp(hrs)=   0.25
07743>
07744>      Unit Hyd Qpeak  (cms)=   1.207
07745>
07746>      PEAK FLOW       (cms)=   1.386 (i)
07747>      TIME TO PEAK    (hrs)=   6.167
07748>      RUNOFF VOLUME    (mm)=  67.082
07749>      TOTAL RAINFALL   (mm)= 102.360
07750>      RUNOFF COEFFICIENT   =   0.655
07751>
07752>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07753>
07754> ------------------------------------------------------------------------------
07755>
07756> --------------------
07757> | ADD HYD  (******)|
07758> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07759> --------------------          (ha)    (cms)    (hrs)     (mm)
07760>         ID1= 1 (******):     0.33   0.069     6.08    66.94
07761>       + ID2= 2 (******):     7.90   1.386     6.17    67.08
07762>         ================================================
07763>         ID = 3 (******):     8.23   1.454     6.17    67.08
07764>
07765>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07766> ------------------------------------------------------------------------------
07767>
07768> --------------------
07769> | ADD HYD  (******)|
07770> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07771> --------------------          (ha)    (cms)    (hrs)     (mm)
07772>         ID1= 1 (******):     0.19   0.045     6.08    66.75
07773>       + ID2= 2 (******):    18.32   2.507     6.25    67.12
07774>         ================================================
07775>         ID = 3 (******):    18.51   2.536     6.25    67.12
07776>
07777>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07778> ------------------------------------------------------------------------------
07779>
07780> --------------------
07781> | ADD HYD  (******)|
07782> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
07783> --------------------          (ha)    (cms)    (hrs)     (mm)
07784>         ID1= 3 (******):    18.51   2.536     6.25    67.12
07785>       + ID2= 2 (******):     8.23   1.454     6.17    67.08
07786>         ================================================
07787>         ID = 1 (******):    26.74   3.921     6.25    67.10
07788>
07789>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07790> ------------------------------------------------------------------------------
07791> --------------------
07792> | CALIB            |
07793> | STANDHYD (******)|   Area    (ha)=   5.85
07794> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
07795> --------------------
07796>                              IMPERVIOUS    PERVIOUS (i)
07797>      Surface Area     (ha)=       5.79         0.06
07798>      Dep. Storage     (mm)=       2.00         4.48
07799>      Average Slope     (%)=       1.70         1.00
07800>      Length            (m)=      78.30         0.00
07801>      Mannings n             =     0.013        0.030
07802>
07803>      Max.Eff.Inten.(mm/hr)=     135.12       108.03
07804>                over (min)        5.00         5.00
07805>      Storage Coeff.  (min)=       1.67 (ii)    1.67 (ii)
07806>      Unit Hyd. Tpeak (min)=       5.00         5.00
07807>      Unit Hyd. peak  (cms)=       0.32         0.32
07808>                                                      *TOTALS*
07809>      PEAK FLOW       (cms)=       2.17         0.02      2.192 (iii)
07810>      TIME TO PEAK    (hrs)=       6.08         6.08       6.08
07811>      RUNOFF VOLUME    (mm)=     100.36        67.14     100.03
07812>      TOTAL RAINFALL   (mm)=     102.36       102.36     102.36
07813>      RUNOFF COEFFICIENT   =       0.98         0.66       0.98
07814>
07815> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
07816>
07817>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
07818>             CN*  =  85.0    Ia = Dep. Storage  (Above)
07819>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
07820>            THAN THE STORAGE COEFFICIENT.
07821>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07822>
07823> ------------------------------------------------------------------------------
07824>
07825> --------------------
07826> | ADD HYD  (******)|
07827> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07828> --------------------          (ha)    (cms)    (hrs)     (mm)
07829>         ID1= 1 (******):     5.85   2.192     6.08   100.03
07830>       + ID2= 2 (******):     1.34   0.379     6.58    76.96
07831>         ================================================
07832>         ID = 3 (******):     7.19   2.192     6.08    95.72
07833>
07834>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07835> ------------------------------------------------------------------------------
07836>
07837> --------------------
07838> | ADD HYD  (******)|
07839> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07840> --------------------          (ha)    (cms)    (hrs)     (mm)
07841>         ID1= 1 (******):     0.47   0.592     6.08    93.62
07842>       + ID2= 2 (******):     7.58   1.529     6.58    76.96
07843>         ================================================
07844>         ID = 3 (******):     8.05   1.529     6.58    77.92
07845>
07846>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07847> ------------------------------------------------------------------------------
07848>
07849> --------------------
07850> | ADD HYD  (******)|
07851> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
07852> --------------------          (ha)    (cms)    (hrs)     (mm)
07853>         ID1= 3 (******):     8.05   1.529     6.58    77.92
07854>       + ID2= 2 (******):     7.19   2.192     6.08    95.72
07855>         ================================================
07856>         ID = 1 (******):    15.24   3.057     6.08    86.32
07857>
07858>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07859> ------------------------------------------------------------------------------
07860> --------------------
07861> | ROUTE CHN(******)|
07862> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
07863> --------------------
07864>                <------ DATA FOR SECTION (   1.1) ------>
07865>               Distance      Elevation       Manning
07866>                   0.00         426.51        0.0450
07867>                   0.98         426.14        0.0350      Main Channel
07868>                   2.04         426.14        0.0350      Main Channel
07869>                  20.51         426.51        0.0350      Main Channel
07870>
07871>       <---------------------- TRAVEL TIME TABLE ---------------------->
07872>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
07873>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
07874>         0.00  426.14    .579E+00        0.0         0.03     191.52
07875>         0.02  426.16    .114E+02        0.0         0.14      39.52
07876>         0.04  426.18    .285E+02        0.0         0.19      27.56
07877>         0.06  426.20    .520E+02        0.0         0.24      22.17
07878>         0.08  426.22    .818E+02        0.1         0.28      18.92
07879>         0.10  426.24    .118E+03        0.1         0.32      16.68
07880>         0.12  426.26    .161E+03        0.2         0.36      15.02
07881>         0.14  426.27    .210E+03        0.3         0.39      13.73
07882>         0.16  426.29    .265E+03        0.3         0.42      12.69
07883>         0.18  426.31    .326E+03        0.5         0.45      11.82
07884>         0.20  426.33    .394E+03        0.6         0.48      11.10
07885>         0.22  426.35    .469E+03        0.7         0.51      10.47
07886>         0.24  426.37    .549E+03        0.9         0.54       9.93
07887>         0.26  426.39    .637E+03        1.1         0.56       9.46
07888>         0.28  426.41    .730E+03        1.3         0.59       9.03
07889>         0.30  426.43    .830E+03        1.6         0.62       8.65
07890>         0.32  426.45    .936E+03        1.9         0.64       8.31
07891>         0.34  426.47    .105E+04        2.2         0.67       8.01
07892>         0.35  426.49    .117E+04        2.5         0.69       7.72
07893>
07894>      **** WARNING:  TRAVEL TIME TABLE EXCEEDED
07895>                                    <---- hydrograph ---->   <-pipe / channel->
07896>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
07897>                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
07898>    INFLOW : ID= 2 (******)   15.24     3.06    6.08  86.32      0.35      0.69
07899>    OUTFLOW: ID= 1 (******)   15.24     2.28    6.17  86.32      0.34      0.67
07900>
07901>
07902>
07903> ------------------------------------------------------------------------------
07904> --------------------
07905> | ROUTEPIPE(******)|     PIPE Number     =   1.00
07906> | IN= 2---> OUT= 1 |     Diameter    (mm)=1650.00
07907> | DT=  5.0 min     |     Length       (m)= 500.00
07908> --------------------     Slope      (m/m)=  0.005
07909>                           Manning n       =  0.013
07910>
07911>      <---------------- TRAVEL TIME TABLE ---------------->
07912>        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
07913>          (m)      (cu.m.)      (cms)        (m/s)        min
07914>         0.09     .216E+02        0.0         0.80       10.40
07915>         0.17     .600E+02        0.1         1.25        6.67
07916>         0.26     .108E+03        0.3         1.61        5.18
07917>         0.35     .164E+03        0.6         1.91        4.36
07918>         0.43     .225E+03        1.0         2.18        3.83
07919>         0.52     .290E+03        1.4         2.41        3.46
07920>         0.61     .358E+03        1.9         2.61        3.19
07921>         0.69     .428E+03        2.4         2.79        2.99
07922>         0.78     .499E+03        2.9         2.95        2.83
07923>         0.87     .570E+03        3.5         3.08        2.70
07924>         0.96     .642E+03        4.1         3.20        2.61
07925>         1.04     .712E+03        4.7         3.29        2.53
07926>         1.13     .780E+03        5.2         3.36        2.48
07927>         1.22     .844E+03        5.8         3.41        2.44
07928>         1.30     .905E+03        6.2         3.44        2.43
07929>         1.39     .961E+03        6.6         3.43        2.43
07930>         1.48     .101E+04        6.9         3.40        2.45
07931>         1.56     .105E+04        6.9         3.31        2.52
07932>         1.65     .107E+04        6.5         3.02        2.76
07933>                                    <---- hydrograph ---->   <-pipe / channel->
07934>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
07935>                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
07936>    INFLOW : ID= 2 (******)    3.64     0.85    6.08  93.62      0.40      2.07
07937>    OUTFLOW: ID= 1 (******)    3.64     0.85    6.08  93.62      0.40      2.07
07938>
07939>
07940>      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
07941>
07942> ------------------------------------------------------------------------------
07943>
07944> --------------------
07945> | ADD HYD  (******)|
07946> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07947> --------------------          (ha)    (cms)    (hrs)     (mm)
07948>         ID1= 1 (******):     3.64   0.851     6.08    93.62
07949>       + ID2= 2 (******):    26.74   3.921     6.25    67.10
07950>         ================================================
07951>         ID = 3 (******):    30.38   4.518     6.17    70.28
07952>
07953>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07954> ------------------------------------------------------------------------------
07955>
07956> --------------------
```

```
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):    30.38   4.518     6.17    70.28
       + ID2= 2 (******):    15.24   2.283     6.17    86.32
         ================================================
         ID = 1 (******):    45.62   6.801     6.17    75.64

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        418.26        0.0450
                   40.58        417.27        0.0450
                   68.64        416.80        0.0450
                  140.74        415.56        0.0450
                  163.74        415.03    0.0450 /0.0350  Main Channel
                  211.93        413.30        0.0350      Main Channel
                  250.43        411.92        0.0350      Main Channel
                  258.86        411.77        0.0350      Main Channel
                  276.07        411.80        0.0350      Main Channel
                  290.03        411.70        0.0350      Main Channel
                  294.99        411.74        0.0350      Main Channel
                  298.74        411.97        0.0350      Main Channel
                  309.80        412.64        0.0350      Main Channel
                  321.40        413.39        0.0350      Main Channel
                  332.67        415.03    0.0350 /0.0450  Main Channel
                  344.47        416.63        0.0450
                  360.44        418.31        0.0450
                  381.73        419.43        0.0450
                  385.80        419.95        0.0450
                  389.30        420.75        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.33  412.03    .115E+05      14.5         1.18      13.21
         0.67  412.36    .302E+05      61.5         1.91       8.18
         1.00  412.70    .535E+05     139.9         2.46       6.38
         1.33  413.03    .814E+05     252.5         2.91       5.37
         1.66  413.36    .114E+06     402.0         3.32       4.72
         2.00  413.70    .150E+06     597.3         3.74       4.19
         2.33  414.03    .190E+06     834.3         4.12       3.80
         2.66  414.36    .234E+06    1114.3         4.47       3.50
         2.99  414.69    .281E+06    1439.4         4.80       3.26
         3.33  415.03    .332E+06    1811.8         5.12       3.06
         3.69  415.39    .393E+06    2361.5         5.65       2.77
         4.05  415.75    .459E+06    2978.2         6.10       2.57
         4.41  416.10    .533E+06    3668.2         6.46       2.42
         4.76  416.46    .615E+06    4437.5         6.78       2.31
         5.12  416.82    .705E+06    5290.7         7.05       2.22
         5.48  417.18    .804E+06    6232.2         7.29       2.15
         5.84  417.54    .910E+06    7276.0         7.51       2.08
         6.20  417.90    .102E+07    8417.1         7.74       2.02
         6.56  418.26    .114E+07    9654.5         7.95       1.97

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)   45.62     6.80    6.17  75.64      0.16      1.18
   OUTFLOW: ID= 1 (******)   45.62     5.45    6.42  75.64      0.13      1.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  31.02   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   3.151 (i)
     TIME TO PEAK    (hrs)=   6.500
     RUNOFF VOLUME    (mm)=  67.133
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    31.02   3.151     6.50    67.13
       + ID2= 2 (******):    45.62   5.451     6.42    75.64
         ================================================
         ID = 3 (******):    76.64   8.566     6.50    72.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 FINISH
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        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
        V    V   I    SS     U   U   A A   L
         V  V    I     SS    U   U  AAAAA  L
          V V    I      SS   U   U A   A  L
           VV    I    SSSSS  UUUUU A   A  LLLLL
 
         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
        O   O    T      T    H   H   Y Y   MM MM  O   O
        O   O    T      T    H   H    Y    M M M  O   O
         OOO     T      T    H   H    Y    M   M   OOO
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                    *****  D E T A I L E D   O U T P U T *****
 
   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
 
 DATE: 02/19/2026                          TIME: 02:59:33
 
 USER:
 
 
 COMMENTS: _____________________________________________________________
 
 --------------------------------------------------------------------------------
   ************************************************
   ** SIMULATION : Regional_12HR_100             **
   ************************************************
 
 --------------------
 |    READ STORM    |    Filename: C:\Users\DPham\AppD
 |                  |              ata\Local\Temp\
 |                  |              624f0758-fc07-48e0-95c7-473b6970493c\730862d3
 | Ptotal=212.34 mm |    Comments: Regional_12HR_100
 --------------------
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.00    0.00 |  3.17   12.70 |'  6.33   23.11 |  9.50   52.83
                  0.17    6.35 |  3.33   12.70 |'  6.50   23.11 |  9.67   52.83
                  0.33    6.35 |  3.50   12.70 |'  6.67   23.11 |  9.83   52.83
                  0.50    6.35 |  3.67   12.70 |'  6.83   23.11 | 10.00   52.83
                  0.67    6.35 |  3.83   12.70 |'  7.00   23.11 | 10.17   37.85
                  0.83    6.35 |  4.00   12.70 |'  7.17   12.70 | 10.33   37.85
                  1.00    6.35 |  4.17   16.76 |'  7.33   12.70 | 10.50   37.85
                  1.17    4.32 |  4.33   16.76 |'  7.50   12.70 | 10.67   37.85
                  1.33    4.32 |  4.50   16.76 |'  7.67   12.70 | 10.83   37.85
                  1.50    4.32 |  4.67   16.76 |'  7.83   12.70 | 11.00   37.85
                  1.67    4.32 |  4.83   16.76 |'  8.00   12.70 | 11.17   12.70
                  1.83    4.32 |  5.00   16.76 |'  8.17   12.70 | 11.33   12.70
                  2.00    4.32 |  5.17   13.97 |'  8.33   12.70 | 11.50   12.70
                  2.17    6.35 |  5.33   13.97 |'  8.50   12.70 | 11.67   12.70
                  2.33    6.35 |  5.50   13.97 |'  8.67   12.70 | 11.83   12.70
                  2.50    6.35 |  5.67   13.97 |'  8.83   12.70 | 12.00   12.70
                  2.67    6.35 |  5.83   13.97 |'  9.00   12.70 |
                  2.83    6.35 |  6.00   13.97 |'  9.17   52.83 |
                  3.00    6.35 |  6.17   23.11 |'  9.33   52.83 |
 
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 --------------------
 | CALIB            |
 | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 90.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.47
 
          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
 
                                 ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
 
      Unit Hyd Qpeak  (cms)=   3.502
 
      PEAK FLOW       (cms)=   5.491 (i)
      TIME TO PEAK    (hrs)=  10.417
      RUNOFF VOLUME    (mm)= 179.127
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.844
 
      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 
 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 90.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.46
 
          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
 
                                 ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
 
      Unit Hyd Qpeak  (cms)=   4.557
 
      PEAK FLOW       (cms)=   7.037 (i)
      TIME TO PEAK    (hrs)=  10.333
      RUNOFF VOLUME    (mm)= 179.195
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.844
 
      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 
 --------------------------------------------------------------------------------
 --------------------
 | READ HYD (  0407)|   AREA       (ha)= 289.00
 | DT= 5.0 min      |   TPEAK     (hrs)=  11.08
 --------------------   VOLUME     (mm)=  14.53
   Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
   Comments: SPILL FROM APPLEBY TO SHELDON NORTH OF HIGHWAY 407
 
   TIME    FLOW |  TIME    FLOW |  TIME    FLOW |'  TIME    FLOW |  TIME    FLOW
    hrs     cms |   hrs     cms |   hrs     cms |'   hrs     cms |   hrs     cms
   0.00   0.000 |  4.83   0.013 |  9.67   0.756 | 14.50   0.000 | 19.33   0.000
   0.08   0.000 |  4.92   0.030 |  9.75   0.954 | 14.58   0.000 | 19.42   0.000
   0.17   0.000 |  5.00   0.058 |  9.83   1.177 | 14.67   0.000 | 19.50   0.000
   0.25   0.000 |  5.08   0.092 |  9.92   1.422 | 14.75   0.000 | 19.58   0.000
   0.33   0.000 |  5.17   0.127 | 10.00   1.703 | 14.83   0.000 | 19.67   0.000
   0.42   0.000 |  5.25   0.157 | 10.08   2.017 | 14.92   0.000 | 19.75   0.000
   0.50   0.000 |  5.33   0.189 | 10.17   2.341 | 15.00   0.000 | 19.83   0.000
   0.58   0.000 |  5.42   0.220 | 10.25   2.668 | 15.08   0.000 | 19.92   0.000
   0.67   0.000 |  5.50   0.249 | 10.33   2.988 | 15.17   0.000 | 20.00   0.000
   0.75   0.000 |  5.58   0.274 | 10.42   3.282 | 15.25   0.000 | 20.08   0.000
   0.83   0.000 |  5.67   0.295 | 10.50   3.543 | 15.33   0.000 | 20.17   0.000
   0.92   0.000 |  5.75   0.313 | 10.58   3.763 | 15.42   0.000 | 20.25   0.000
   1.00   0.000 |  5.83   0.328 | 10.67   3.941 | 15.50   0.000 | 20.33   0.000
   1.08   0.000 |  5.92   0.339 | 10.75   4.072 | 15.58   0.000 | 20.42   0.000
   1.17   0.000 |  6.00   0.348 | 10.83   4.170 | 15.67   0.000 | 20.50   0.000
   1.25   0.000 |  6.08   0.354 | 10.92   4.232 | 15.75   0.000 | 20.58   0.000
   1.33   0.000 |  6.17   0.360 | 11.00   4.266 | 15.83   0.000 | 20.67   0.000
   1.42   0.000 |  6.25   0.364 | 11.08   4.277 | 15.92   0.000 | 20.75   0.000
   1.50   0.000 |  6.33   0.370 | 11.17   4.270 | 16.00   0.000 | 20.83   0.000
   1.58   0.000 |  6.42   0.379 | 11.25   4.246 | 16.08   0.000 | 20.92   0.000
   1.67   0.000 |  6.50   0.395 | 11.33   4.203 | 16.17   0.000 | 21.00   0.000
   1.75   0.000 |  6.58   0.419 | 11.42   4.133 | 16.25   0.000 | 21.08   0.000
   1.83   0.000 |  6.67   0.450 | 11.50   4.030 | 16.33   0.000 | 21.17   0.000
   1.92   0.000 |  6.75   0.490 | 11.58   3.890 | 16.42   0.000 | 21.25   0.000
   2.00   0.000 |  6.83   0.536 | 11.67   3.718 | 16.50   0.000 | 21.33   0.000
   2.08   0.000 |  6.92   0.588 | 11.75   3.519 | 16.58   0.000 | 21.42   0.000
   2.17   0.000 |  7.00   0.644 | 11.83   3.303 | 16.67   0.000 | 21.50   0.000
   2.25   0.000 |  7.08   0.702 | 11.92   3.067 | 16.75   0.000 | 21.58   0.000
   2.33   0.000 |  7.17   0.759 | 12.00   2.825 | 16.83   0.000 | 21.67   0.000
   2.42   0.000 |  7.25   0.816 | 12.08   2.584 | 16.92   0.000 | 21.75   0.000
   2.50   0.000 |  7.33   0.870 | 12.17   2.352 | 17.00   0.000 | 21.83   0.000
   2.58   0.000 |  7.42   0.914 | 12.25   2.128 | 17.08   0.000 | 21.92   0.000
   2.67   0.000 |  7.50   0.945 | 12.33   1.911 | 17.17   0.000 | 22.00   0.000
   2.75   0.000 |  7.58   0.963 | 12.42   1.697 | 17.25   0.000 | 22.08   0.000
   2.83   0.000 |  7.67   0.969 | 12.50   1.484 | 17.33   0.000 | 22.17   0.000
   2.92   0.000 |  7.75   0.961 | 12.58   1.268 | 17.42   0.000 | 22.25   0.000
   3.00   0.000 |  7.83   0.942 | 12.67   1.058 | 17.50   0.000 | 22.33   0.000
   3.08   0.000 |  7.92   0.912 | 12.75   0.871 | 17.58   0.000 | 22.42   0.000
   3.17   0.000 |  8.00   0.876 | 12.83   0.698 | 17.67   0.000 | 22.50   0.000
   3.25   0.000 |  8.08   0.835 | 12.92   0.540 | 17.75   0.000 | 22.58   0.000
   3.33   0.000 |  8.17   0.791 | 13.00   0.395 | 17.83   0.000 | 22.67   0.000
   3.42   0.000 |  8.25   0.747 | 13.08   0.272 | 17.92   0.000 | 22.75   0.000
   3.50   0.000 |  8.33   0.703 | 13.17   0.174 | 18.00   0.000 | 22.83   0.000
   3.58   0.000 |  8.42   0.661 | 13.25   0.098 | 18.08   0.000 | 22.92   0.000
   3.67   0.000 |  8.50   0.620 | 13.33   0.039 | 18.17   0.000 | 23.00   0.000
   3.75   0.000 |  8.58   0.581 | 13.42   0.012 | 18.25   0.000 | 23.08   0.000
   3.83   0.000 |  8.67   0.546 | 13.50   0.003 | 18.33   0.000 | 23.17   0.000
   3.92   0.000 |  8.75   0.516 | 13.58   0.000 | 18.42   0.000 | 23.25   0.000
   4.00   0.000 |  8.83   0.490 | 13.67   0.000 | 18.50   0.000 | 23.33   0.000
   4.08   0.000 |  8.92   0.466 | 13.75   0.000 | 18.58   0.000 | 23.42   0.000
   4.17   0.000 |  9.00   0.444 | 13.83   0.000 | 18.67   0.000 | 23.50   0.000
   4.25   0.000 |  9.08   0.427 | 13.92   0.000 | 18.75   0.000 | 23.58   0.000
   4.33   0.000 |  9.17   0.411 | 14.00   0.000 | 18.83   0.000 | 23.67   0.000
   4.42   0.000 |  9.25   0.400 | 14.08   0.000 | 18.92   0.000 | 23.75   0.000
   4.50   0.000 |  9.33   0.402 | 14.17   0.000 | 19.00   0.000 | 23.83   0.000
   4.58   0.000 |  9.42   0.429 | 14.25   0.000 | 19.08   0.000 | 23.92   0.000
   4.67   0.000 |  9.50   0.493 | 14.33   0.000 | 19.17   0.000 | 24.00   0.000
   4.75   0.004 |  9.58   0.602 | 14.42   0.000 | 19.25   0.000 |
 --------------------------------------------------------------------------------
 
 --------------------
 | ADD HYD  ( 50010)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40010):    43.09   5.491    10.42   179.13
      + ID2= 2 ( 40030):    54.88   7.037    10.33   179.20
        ================================================
        ID = 3 ( 50010):    97.97  12.527    10.33   179.17
 
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 
 --------------------
 | ADD HYD  ( 50010)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50010):    97.97  12.527    10.33   179.17
      + ID2= 2 (  0407):   289.00   4.277    11.08    14.53
        ================================================
        ID = 1 ( 50010):   386.97  15.938    10.58    56.21
 
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60010)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                 <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         160.98        0.0450
                   10.00         160.83        0.0450
                   20.00         160.72        0.0450
                   30.00         160.67        0.0450
                   40.00         160.61        0.0450
                   50.00         160.60        0.0450
                   60.00         160.55        0.0450
                   70.00         160.65        0.0450
                   80.00         159.78        0.0450
                   90.00         157.33    0.0450 /0.0350  Main Channel
                  100.00         157.18        0.0350      Main Channel
                  110.00         158.55        0.0450
                  120.00         160.34        0.0450
                  130.00         160.29        0.0450
                  140.00         160.30        0.0450
                  150.00         160.38        0.0450
```

```
                160.00        160.53        0.0450
                170.00        160.58        0.0450
                180.00        160.51        0.0450
                190.00        160.53        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15  157.33    .123E+04        0.4         0.43      57.39
        0.32  157.50    .422E+04        2.5         0.88      27.82
        0.49  157.67    .768E+04        6.3         1.20      20.47
        0.66  157.83    .116E+05       11.5         1.45      16.89
        0.83  158.00    .160E+05       18.2         1.67      14.70
        0.99  158.17    .209E+05       26.5         1.86      13.18
        1.16  158.34    .263E+05       36.3         2.03      12.06
        1.33  158.51    .321E+05       47.9         2.19      11.18
        1.50  158.68    .384E+05       62.7         2.40      10.21
        1.67  158.84    .451E+05       79.9         2.60       9.41
        1.84  159.01    .522E+05       99.0         2.79       8.79
        2.00  159.18    .597E+05      120.2         2.96       8.28
        2.17  159.35    .676E+05      143.3         3.11       7.86
        2.34  159.52    .759E+05      168.5         3.26       7.51
        2.51  159.69    .846E+05      195.8         3.40       7.20
        2.68  159.86    .938E+05      224.4         3.52       6.97
        2.85  160.02    .104E+06      254.6         3.61       6.78
        3.02  160.19    .114E+06      287.5         3.70       6.62
        3.18  160.36    .127E+06      315.8         3.64       6.72

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50010)  386.97    15.94   10.58  56.21      0.77      1.59
   OUTFLOW: ID= 1 ( 60010)  386.97    15.57   10.83  56.21      0.76      1.57


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40020)|   Area    (ha)=  51.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      33.87        17.45
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     584.91        50.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
       hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
     0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
     0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
     0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
     0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
     0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
     0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
     0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
     0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
     0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
     0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
     0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
     1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
     1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
     1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
     1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
     1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
     1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
     1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
     1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
     1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
     1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
     1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
     1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
     2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
     2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
     2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
     2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
     2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
     2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
     2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
     2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
     2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
     2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
     2.833     6.35 | 5.917    13.97 | 9.000    12.70 | 12.08    12.70
     2.917     6.35 | 6.000    13.97 | 9.083    12.70 | 12.17    12.70
     3.000     6.35 | 6.083    13.97 | 9.167    12.70 |
     3.083     6.35 | 6.167    13.97 | 9.250    52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        67.27
               over (min)       10.00        25.00
  Storage Coeff.  (min)=       9.58 (ii)    21.35 (ii)
  Unit Hyd. Tpeak (min)=      10.00        25.00
  Unit Hyd. peak  (cms)=       0.11         0.05
                                                *TOTALS*
  PEAK FLOW       (cms)=       4.21         3.01          7.188 (iii)
  TIME TO PEAK    (hrs)=      10.17        10.25          10.17
  RUNOFF VOLUME    (mm)=     210.34       187.81         200.43
  TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
  RUNOFF COEFFICIENT   =       0.99         0.88           0.94

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN*  =  90.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50020)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40020):    51.32   7.188    10.17   200.43
     + ID2= 2 ( 60010):   386.97  15.573    10.83    56.21
       ===================================================
       ID = 3 ( 50020):   438.29  21.246    10.67    73.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        153.66        0.0450
                   1.00        153.24        0.0450
                   2.00        152.95        0.0450
                   3.00        152.70        0.0450
                   4.00        152.40        0.0450
                   5.00        152.09        0.0450
                   6.00        151.83        0.0450
                   7.00        151.60        0.0450
                   8.00        151.49    0.0450 /0.0350  Main Channel
                   9.00        151.42        0.0350      Main Channel
                  10.00        151.38        0.0350      Main Channel
                  11.00        151.40        0.0350      Main Channel
                  12.00        151.38        0.0350      Main Channel
                  13.00        151.38        0.0350      Main Channel
                  14.00        151.38        0.0350      Main Channel
                  15.00        151.50    0.0350 /0.0450  Main Channel
                  16.00        151.56        0.0450
                  17.00        151.60        0.0450
                  25.00        153.59        0.0450
                  26.00        153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  151.49    .140E+03        0.2         0.36      10.54
        0.23  151.60    .355E+03        0.9         0.58       6.57
        0.34  151.72    .624E+03        2.0         0.74       5.11
        0.45  151.83    .916E+03        3.6         0.89       4.27
        0.57  151.94    .123E+04        5.5         1.02       3.73
        0.68  152.05    .157E+04        7.8         1.13       3.35
        0.79  152.17    .193E+04       10.5         1.24       3.06
        0.90  152.28    .231E+04       13.6         1.34       2.83
        1.02  152.39    .271E+04       17.1         1.43       2.65
        1.13  152.50    .314E+04       20.9         1.52       2.50
        1.24  152.62    .358E+04       25.2         1.60       2.37
        1.35  152.73    .405E+04       29.8         1.67       2.26
        1.47  152.84    .454E+04       34.9         1.75       2.17
        1.58  152.95    .505E+04       40.3         1.81       2.09
        1.69  153.07    .558E+04       46.2         1.88       2.01
        1.80  153.18    .614E+04       52.6         1.95       1.95
        1.92  153.29    .672E+04       59.4         2.01       1.88
        2.03  153.40    .731E+04       66.7         2.07       1.83
        2.14  153.52    .793E+04       74.5         2.14       1.77

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50020)  438.29    21.25   10.67  73.09      1.14      1.52
   OUTFLOW: ID= 1 ( 60020)  438.29    21.24   10.75  73.09      1.14      1.52


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31        18.38
     Dep. Storage     (mm)=       2.00         6.00
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     686.45        52.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
       hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
     0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
     0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
     0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
     0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
     0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
     0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
     0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
     0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
     0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
     0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
     0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
     1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
     1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
     1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
     1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
     1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
     1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
     1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
     1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
     1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
     1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
     1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
     1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
     2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
     2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
     2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
     2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
     2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
     2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
     2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
     2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
     2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
     2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
     2.833     6.35 | 5.917    13.97 | 9.000    12.70 | 12.08    12.70
     2.917     6.35 | 6.000    13.97 | 9.083    12.70 | 12.17    12.70
     3.000     6.35 | 6.083    13.97 | 9.167    12.70 |
     3.083     6.35 | 6.167    13.97 | 9.250    52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        80.32
               over (min)       10.00        25.00
  Storage Coeff.  (min)=      10.81 (ii)   22.06 (ii)
  Unit Hyd. Tpeak (min)=      10.00        25.00
  Unit Hyd. peak  (cms)=       0.11         0.05
                                                *TOTALS*
  PEAK FLOW       (cms)=       6.20         3.77          9.926 (iii)
  TIME TO PEAK    (hrs)=      10.17        10.25          10.17
  RUNOFF VOLUME    (mm)=     210.34       191.58         202.84
  TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
  RUNOFF COEFFICIENT   =       0.99         0.90           0.96

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN*  =  90.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40040):    70.68   9.926    10.17   202.84
     + ID2= 2 ( 60020):   438.29  21.236    10.75    73.09
       ===================================================
       ID = 3 ( 50220):   508.97  29.513    10.25    91.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        148.49        0.0450
                   3.00        148.12        0.0450
                   6.00        148.07        0.0450
                   9.00        147.63        0.0450
                  12.00        147.56        0.0450
                  15.00        147.55        0.0450
                  18.00        147.46        0.0450
                  21.00        147.41        0.0450
                  24.00        147.36        0.0450
                  27.00        147.38        0.0450
                  30.00        147.22        0.0450
                  33.00        147.00        0.0450
                  36.00        146.34        0.0450
                  39.00        145.57        0.0350      Main Channel
                  42.00        145.39        0.0350      Main Channel
                  45.00        145.66        0.0350      Main Channel
                  48.00        146.68        0.0450
                  51.00        147.50        0.0450
                  55.00        148.22        0.0450
                  60.00        148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  145.48    .145E+03        0.0         0.25      83.65
        0.18  145.57    .581E+03        0.2         0.40      52.70
        0.35  145.74    .189E+04        1.1         0.73      29.09
        0.52  145.91    .348E+04        2.7         0.99      21.52
```

```
        0.68   146.07    .532E+04       5.0          1.19      17.84
        0.85   146.24    .740E+04       7.9          1.36      15.60
        1.02   146.41    .973E+04      11.5          1.51      14.07
        1.19   146.58    .123E+05      15.9          1.64      12.94
        1.35   146.74    .152E+05      21.2          1.78      11.93
        1.52   146.91    .183E+05      27.8          1.94      10.99
        1.69   147.08    .218E+05      35.0          2.05      10.39
        1.86   147.25    .259E+05      43.0          2.12      10.03
        2.02   147.41    .309E+05      50.6          2.09      10.18
        2.19   147.58    .383E+05      61.5          2.05      10.37
        2.36   147.75    .474E+05      77.1          2.07      10.25
        2.52   147.91    .571E+05      95.6          2.14       9.95
        2.69   148.08    .672E+05     116.0          2.20       9.65
        2.86   148.25    .783E+05     138.1          2.25       9.45
        3.03   148.42    .904E+05     163.4          2.31       9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50220)  508.97    29.51   10.25  91.11      1.56      1.96
   OUTFLOW: ID= 1 ( 60040)  508.97    29.20   10.67  91.11      1.55      1.95


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94        19.34
     Dep. Storage     (mm)=       2.00         6.30
     Average Slope     (%)=       3.30         3.30
     Length            (m)=     590.36        68.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
              0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
              0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
              0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
              0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
              0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
              0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
              0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
              0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
              0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
              0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
              1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
              1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
              1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
              1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
              1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
              1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
              1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
              1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
              1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
              1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
              1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
              1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
              2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
              2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
              2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
              2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
              2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
              2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
              2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
              2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
              2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
              2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
              2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
              2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
              3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
              3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        71.99
                  over (min)       5.00        20.00
     Storage Coeff.  (min)=       7.29 (ii)   17.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.76         3.70          7.459 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       191.01        200.48
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.90          0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  91.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40050):    52.28    7.459    10.17   200.48
     + ID2= 2 ( 60040):   508.97   29.199    10.67    91.11
       ================================================
       ID = 3 ( 50040):   561.25   35.246    10.42   101.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         146.35        0.0450
                 16.00         145.17        0.0450
                 18.00         144.62        0.0450
                 20.00         143.50        0.0450
                 26.00         141.63        0.0350      Main Channel
                 30.00         142.17        0.0350      Main Channel
                 34.00         144.28        0.0450
                 38.00         145.27        0.0450
                 50.00         146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25   141.88    .129E+03        0.2          0.54      12.17
        0.50   142.13    .516E+03        1.1          0.86       7.67
        0.74   142.38    .111E+04        3.4          1.21       5.42
        0.99   142.63    .184E+04        7.0          1.50       4.37
        1.24   142.87    .269E+04       11.9          1.75       3.76
        1.49   143.12    .366E+04       18.2          1.96       3.36
        1.74   143.37    .476E+04       25.9          2.15       3.06
        1.98   143.62    .597E+04       35.3          2.33       2.82
        2.23   143.87    .729E+04       46.5          2.52       2.61
        2.48   144.11    .869E+04       59.3          2.69       2.44
        2.73   144.36    .102E+05       74.3          2.88       2.28
        2.97   144.61    .118E+05       92.4          3.09       2.13
        3.22   144.86    .136E+05      111.6          3.24       2.03
        3.47   145.11    .156E+05      133.1          3.37       1.95
        3.72   145.35    .178E+05      152.6          3.38       1.94
        3.97   145.60    .206E+05      175.6          3.37       1.95
        4.21   145.85    .239E+05      204.3          3.37       1.95
        4.46   146.10    .279E+05      238.6          3.38       1.95
        4.71   146.35    .324E+05      279.0          3.40       1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  561.25    35.25   10.42 101.30      1.98      2.33
   OUTFLOW: ID= 1 ( 60050)  561.25    35.24   10.42 101.30      1.98      2.33


--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         142.52        0.0450
                  2.00         142.41        0.0450
                  4.00         142.26        0.0450
                  6.00         142.08        0.0450
                  8.00         141.85        0.0450
                 10.00         141.61        0.0450
                 12.00         141.38        0.0450
                 14.00         141.11        0.0450
                 16.00         140.93        0.0450
                 18.00         140.83        0.0450
                 20.00         140.73        0.0350      Main Channel
                 22.00         140.55        0.0350      Main Channel
                 24.00         140.49        0.0350      Main Channel
                 26.00         140.65        0.0350      Main Channel
                 28.00         141.04        0.0450
                 30.00         141.72        0.0450
                 32.00         142.19        0.0450
                 40.00         142.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   140.57    .466E+02        0.0          0.23      24.59
        0.15   140.65    .155E+03        0.2          0.38      14.98
        0.23   140.73    .305E+03        0.5          0.51      11.12
        0.34   140.84    .598E+03        1.2          0.68       8.29
        0.45   140.95    .995E+03        2.3          0.80       7.09
        0.56   141.06    .147E+04        3.9          0.91       6.22
        0.68   141.17    .201E+04        6.1          1.04       5.45
        0.79   141.28    .259E+04        8.8          1.16       4.89
        0.90   141.39    .321E+04       12.0          1.27       4.47
        1.01   141.50    .389E+04       15.6          1.36       4.16
        1.12   141.61    .461E+04       19.7          1.45       3.90
        1.23   141.72    .537E+04       24.3          1.54       3.69
        1.34   141.84    .619E+04       29.4          1.61       3.52
        1.45   141.95    .707E+04       35.0          1.68       3.37
        1.56   142.06    .799E+04       41.1          1.75       3.24
        1.67   142.17    .898E+04       47.8          1.81       3.13
        1.79   142.28    .101E+05       54.6          1.85       3.07
        1.90   142.39    .113E+05       62.1          1.87       3.03
        2.01   142.50    .127E+05       70.3          1.88       3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  561.25    35.24   10.42 101.30      1.46      1.69
   OUTFLOW: ID= 1 ( 60060)  561.25    35.22   10.50 101.30      1.46      1.69


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94         1.90
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       2.60         2.60
     Length            (m)=     137.56        98.00
     Mannings n           =      0.015        0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
              0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
              0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
              0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
              0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
              0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
              0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
              0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
              0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
              0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
              0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
              1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
              1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
              1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
              1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
              1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
              1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
              1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
              1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
              1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
              1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
              1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
              1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
              2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
              2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
              2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
              2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
              2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
              2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
              2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
              2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
              2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
              2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
              2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
              2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
              3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
              3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        57.39
                  over (min)       5.00        20.00
     Storage Coeff.  (min)=       3.27 (ii)   19.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.27         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.29          0.394 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       187.10        193.20
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.88          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  92.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40060):     2.84    0.394    10.17   193.20
     + ID2= 2 ( 60060):   561.25   35.217    10.50   101.30
       ================================================
       ID = 3 ( 50070):   564.09   35.556    10.50   101.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30         13.55
     Dep. Storage     (mm)=       2.00          5.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     515.42         72.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
              0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
              0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
              0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
              0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
              0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
              0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
              0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
              0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
              0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
              0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
              1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
              1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
              1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
              1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
              1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
              1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
              1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
              1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
              1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
              1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
              1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
              1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
              2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
              2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
              2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
              2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
              2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
              2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
              2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
              2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
              2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
              2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
              2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
              2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
              3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
              3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83         70.62
                   over (min)       10.00         25.00
     Storage Coeff.  (min)=       8.69 (ii)    22.14 (ii)
     Unit Hyd. Tpeak (min)=      10.00         25.00
     Unit Hyd. peak  (cms)=       0.12          0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       3.15          2.44          5.568 (iii)
     TIME TO PEAK    (hrs)=      10.17         10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34        191.15        201.51
     TOTAL RAINFALL   (mm)=     212.34        212.34        212.34
     RUNOFF COEFFICIENT   =       0.99          0.90          0.95

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  91.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40080):    39.85    5.568    10.17   201.51
     + ID2= 2 ( 50070):   564.09   35.556    10.50   101.76
       ================================================
       ID = 3 ( 50080):   603.94   40.386    10.42   108.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         141.24        0.0450
                 40.00         140.58        0.0450
                 50.00         140.57        0.0450
                 60.00         140.36        0.0450
                 70.00         140.19        0.0450
                 80.00         140.15        0.0450
                 90.00         139.70        0.0450
                100.00         139.54        0.0350      Main Channel
                110.00         139.97        0.0450
                120.00         140.53        0.0450
                130.00         140.63        0.0450
                140.00         140.72        0.0450
                150.00         140.87        0.0450
                190.00         141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
        0.09  139.63    .150E+03         0.1         0.18       43.53
        0.17  139.71    .598E+03         0.4         0.30       27.01
        0.26  139.80    .126E+04         1.1         0.42       19.24
        0.34  139.88    .209E+04         2.2         0.52       15.58
        0.43  139.97    .307E+04         3.8         0.60       13.36
        0.51  140.05    .420E+04         6.1         0.70       11.45
        0.60  140.14    .548E+04         9.0         0.79       10.19
        0.68  140.22    .714E+04        11.3         0.76       10.55
        0.77  140.31    .919E+04        15.7         0.82        9.77
        0.85  140.39    .115E+05        21.0         0.88        9.11
        0.94  140.48    .141E+05        27.4         0.94        8.54
        1.02  140.56    .169E+05        34.6         0.99        8.12
        1.11  140.65    .205E+05        41.1         0.97        8.32
        1.19  140.74    .248E+05        51.5         1.00        8.02
        1.28  140.82    .296E+05        64.0         1.04        7.70
        1.36  140.91    .348E+05        78.0         1.08        7.44
        1.45  140.99    .407E+05        93.6         1.11        7.24
        1.53  141.08    .472E+05       111.7         1.14        7.05
        1.62  141.16    .545E+05       132.2         1.17        6.87

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  603.94    40.39    10.42  108.34      1.10      0.97
   OUTFLOW: ID= 1 ( 60080)  603.94    39.90    10.67  108.34      1.09      0.97


---------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.99          3.46
     Dep. Storage     (mm)=       2.00          9.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     172.19         99.00
     Mannings n           =      0.015         0.370


     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
              0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
              0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
              0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
              0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
              0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
              0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
              0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
              0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
              0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
              0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
              1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
              1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
              1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
              1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
              1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
              1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
              1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
              1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
              1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
              1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
              1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
              1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
              2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
              2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
              2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
              2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
              2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
              2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
              2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
              2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
              2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
              2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
              2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
              2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
              3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
              3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83         57.00
                   over (min)        5.00         25.00
     Storage Coeff.  (min)=       3.83 (ii)    22.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.25          0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.50          0.586 (iii)
     TIME TO PEAK    (hrs)=      10.17         10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34        178.75        183.10
     TOTAL RAINFALL   (mm)=     212.34        212.34        212.34
     RUNOFF COEFFICIENT   =       0.99          0.84          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40090):     4.45    0.586    10.17   183.10
     + ID2= 2 ( 60080):   603.94   39.902    10.67   108.34
       ================================================
       ID = 3 ( 50090):   608.39   40.417    10.67   108.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         138.71        0.0450
                  4.00         136.97        0.0450
                 28.00         135.94        0.0450
                 32.00         135.79        0.0350      Main Channel
                 36.00         135.23        0.0350      Main Channel
                 40.00         135.71    0.0350 /0.0450  Main Channel
                 54.00         136.96        0.0450
                 80.00         138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
        0.16  135.39    .631E+02         0.1         0.44       12.42
        0.31  135.55    .253E+03         0.5         0.69        7.83
        0.47  135.71    .568E+03         1.6         0.91        5.97
        0.65  135.89    .114E+04         4.2         1.20        4.52
        0.84  136.07    .209E+04         8.7         1.35        4.02
        1.02  136.25    .342E+04        15.4         1.47        3.70
        1.20  136.44    .511E+04        24.8         1.58        3.44
        1.38  136.62    .718E+04        37.2         1.69        3.21
        1.57  136.80    .962E+04        53.1         1.79        3.02
        1.75  136.98    .124E+05        72.7         1.90        2.85
        1.93  137.17    .155E+05        97.8         2.05        2.64
        2.11  137.35    .188E+05       127.1         2.20        2.47
        2.30  137.53    .223E+05       160.4         2.34        2.31
        2.48  137.71    .259E+05       197.8         2.48        2.19
        2.66  137.90    .298E+05       239.5         2.61        2.07
        2.85  138.08    .339E+05       285.4         2.74        1.98
        3.03  138.26    .381E+05       335.6         2.86        1.89
        3.21  138.44    .426E+05       390.3         2.98        1.82
        3.39  138.63    .472E+05       449.4         3.10        1.75

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  608.39    40.42    10.67  108.89      1.42      1.71
   OUTFLOW: ID= 1 ( 60100)  608.39    40.39    10.67  108.89      1.42      1.71


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--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.46         14.44
     Dep. Storage     (mm)=       2.00          6.20
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     423.45        125.00
     Mannings n           =      0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
              0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
              0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
              0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
              0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
              0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
              0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
              0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
```

	0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
	0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
	0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
	1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
	1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
	1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
	1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
	1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
	1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
	1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
	1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
	1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
	1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
	1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
	1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
	3.000	6.35	6.083	13.97	9.167	12.70		
	3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	55.78	
over (min)	10.00	30.00	
Storage Coeff. (min)=	7.72 (ii)	28.76 (ii)	
Unit Hyd. Tpeak (min)=	10.00	30.00	
Unit Hyd. peak (cms)=	0.13	0.04	
			TOTALS
PEAK FLOW (cms)=	1.67	1.95	3.544 (iii)
TIME TO PEAK (hrs)=	10.17	10.42	10.17
RUNOFF VOLUME (mm)=	210.34	187.83	197.38
TOTAL RAINFALL (mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT =	0.99	0.88	0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 92.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| READ HYD (0416)| AREA (ha)= 289.00
| DT= 5.0 min | TPEAK (hrs)= 11.17
VOLUME (mm)= 11.32

Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
Comments: HYDROGRAPH from Area 4 2D model_Pond 804 east berm - updated

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.000	4.83	0.000	9.67	0.000	14.50	0.005	19.33	0.000
0.08	0.000	4.92	0.000	9.75	0.000	14.58	0.004	19.42	0.000
0.17	0.000	5.00	0.000	9.83	0.000	14.67	0.004	19.50	0.000
0.25	0.000	5.08	0.000	9.92	0.000	14.75	0.004	19.58	0.000
0.33	0.000	5.17	0.000	10.00	0.000	14.83	0.004	19.67	0.000
0.42	0.000	5.25	0.000	10.08	0.000	14.92	0.003	19.75	0.000
0.50	0.000	5.33	0.000	10.17	0.000	15.00	0.003	19.83	0.000
0.58	0.000	5.42	0.000	10.25	0.000	15.08	0.003	19.92	0.000
0.67	0.000	5.50	0.000	10.33	0.100	15.17	0.003	20.00	0.000
0.75	0.000	5.58	0.000	10.42	0.271	15.25	0.003	20.08	0.000
0.83	0.000	5.67	0.000	10.50	0.831	15.33	0.002	20.17	0.000
0.92	0.000	5.75	0.000	10.58	2.162	15.42	0.002	20.25	0.000
1.00	0.000	5.83	0.000	10.67	3.843	15.50	0.002	20.33	0.000
1.08	0.000	5.92	0.000	10.75	5.565	15.58	0.002	20.42	0.000
1.17	0.000	6.00	0.000	10.83	6.966	15.67	0.002	20.50	0.000
1.25	0.000	6.08	0.000	10.92	7.939	15.75	0.002	20.58	0.000
1.33	0.000	6.17	0.000	11.00	8.528	15.83	0.002	20.67	0.000
1.42	0.000	6.25	0.000	11.08	8.849	15.92	0.001	20.75	0.000
1.50	0.000	6.33	0.000	11.17	8.954	16.00	0.001	20.83	0.000
1.58	0.000	6.42	0.000	11.25	8.885	16.08	0.001	20.92	0.000
1.67	0.000	6.50	0.000	11.33	8.588	16.17	0.001	21.00	0.000
1.75	0.000	6.58	0.000	11.42	8.003	16.25	0.001	21.08	0.000
1.83	0.000	6.67	0.000	11.50	7.152	16.33	0.001	21.17	0.000
1.92	0.000	6.75	0.000	11.58	6.109	16.42	0.001	21.25	0.000
2.00	0.000	6.83	0.000	11.67	4.882	16.50	0.001	21.33	0.000
2.08	0.000	6.92	0.000	11.75	3.745	16.58	0.001	21.42	0.000
2.17	0.000	7.00	0.000	11.83	2.680	16.67	0.001	21.50	0.000
2.25	0.000	7.08	0.000	11.92	1.849	16.75	0.001	21.58	0.000
2.33	0.000	7.17	0.000	12.00	1.251	16.83	0.001	21.67	0.000
2.42	0.000	7.25	0.000	12.08	0.810	16.92	0.001	21.75	0.000
2.50	0.000	7.33	0.000	12.17	0.473	17.00	0.001	21.83	0.000
2.58	0.000	7.42	0.000	12.25	0.236	17.08	0.001	21.92	0.000
2.67	0.000	7.50	0.000	12.33	0.088	17.17	0.001	22.00	0.000
2.75	0.000	7.58	0.000	12.42	0.018	17.25	0.000	22.08	0.000
2.83	0.000	7.67	0.000	12.50	0.011	17.33	0.000	22.17	0.000
2.92	0.000	7.75	0.000	12.58	0.007	17.42	0.000	22.25	0.000
3.00	0.000	7.83	0.000	12.67	0.012	17.50	0.000	22.33	0.000
3.08	0.000	7.92	0.000	12.75	0.019	17.58	0.000	22.42	0.000
3.17	0.000	8.00	0.000	12.83	0.020	17.67	0.000	22.50	0.000
3.25	0.000	8.08	0.000	12.92	0.016	17.75	0.000	22.58	0.000
3.33	0.000	8.17	0.000	13.00	0.012	17.83	0.000	22.67	0.000
3.42	0.000	8.25	0.000	13.08	0.012	17.92	0.000	22.75	0.000
3.50	0.000	8.33	0.000	13.17	0.011	18.00	0.000	22.83	0.000
3.58	0.000	8.42	0.000	13.25	0.011	18.08	0.000	22.92	0.000
3.67	0.000	8.50	0.000	13.33	0.011	18.17	0.000	23.00	0.000
3.75	0.000	8.58	0.000	13.42	0.008	18.25	0.000	23.08	0.000
3.83	0.000	8.67	0.000	13.50	0.009	18.33	0.000	23.17	0.000
3.92	0.000	8.75	0.000	13.58	0.008	18.42	0.000	23.25	0.000
4.00	0.000	8.83	0.000	13.67	0.008	18.50	0.000	23.33	0.000
4.08	0.000	8.92	0.000	13.75	0.008	18.58	0.000	23.42	0.000
4.17	0.000	9.00	0.000	13.83	0.007	18.67	0.000	23.50	0.000
4.25	0.000	9.08	0.000	13.92	0.007	18.75	0.000	23.58	0.000
4.33	0.000	9.17	0.000	14.00	0.006	18.83	0.000	23.67	0.000
4.42	0.000	9.25	0.000	14.08	0.006	18.92	0.000	23.75	0.000
4.50	0.000	9.33	0.000	14.17	0.006	19.00	0.000	23.83	0.000
4.58	0.000	9.42	0.000	14.25	0.006	19.08	0.000	23.92	0.000
4.67	0.000	9.50	0.000	14.33	0.005	19.17	0.000	24.00	0.000
4.75	0.000	9.58	0.000	14.42	0.005	19.25	0.000		

ADD HYD (50110)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40100):	26.90	3.544	10.17	197.38
+ ID2= 2 (0416):	289.00	8.954	11.17	11.32
ID = 3 (50110):	315.90	11.852	11.17	27.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50110)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50110):	315.90	11.852	11.17	27.16
+ ID2= 2 (60100):	608.39	40.393	10.67	108.89
ID = 1 (50110):	924.28	51.590	11.08	80.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (40120)	ID= 1 DT= 5.0 min	Area (ha)=	44.60	Curve Number (CN)=	91.0
		Ia (mm)=	7.89	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.43		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)=	3.961		
PEAK FLOW (cms)=	5.850 (i)		
TIME TO PEAK (hrs)=	10.333		
RUNOFF VOLUME (mm)=	182.061		
TOTAL RAINFALL (mm)=	212.340		
RUNOFF COEFFICIENT =	0.857		

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (40130)	ID= 1 DT= 5.0 min	Area (ha)=	63.82	Curve Number (CN)=	92.0
		Ia (mm)=	7.55	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.50		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)=	4.875		
PEAK FLOW (cms)=	8.104 (i)		
TIME TO PEAK (hrs)=	10.417		
RUNOFF VOLUME (mm)=	184.844		
TOTAL RAINFALL (mm)=	212.340		
RUNOFF COEFFICIENT =	0.871		

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50130)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40120):	44.60	5.850	10.33	182.06
+ ID2= 2 (40130):	63.82	8.104	10.42	184.84
ID = 3 (50130):	108.42	13.911	10.33	183.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60130)					
IN= 2---> OUT= 1	Routing time step (min)'=	5.00			

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	155.27	0.0450	
2.00	155.23	0.0450	
4.00	155.21	0.0450	
6.00	155.08	0.0450	
8.00	154.94	0.0450	
10.00	154.68	0.0450	
12.00	154.21	0.0450	
14.00	153.90	0.0450	
16.00	153.41	0.0350	Main Channel
18.00	153.58	0.0350	Main Channel
20.00	153.72	0.0350 /0.0450	Main Channel
22.00	153.77	0.0450	
24.00	153.77	0.0450	
26.00	153.82	0.0450	
28.00	153.79	0.0450	
30.00	153.87	0.0450	
32.00	153.99	0.0450	
34.00	154.44	0.0450	
36.00	154.86	0.0450	
40.00	155.37	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)

01531>	0.10	153.50	.107E+03	0.0	0.27	87.23
01532>	0.20	153.60	.429E+03	0.1	0.42	55.65
01533>	0.29	153.70	.991E+03	0.4	0.55	42.98
01534>	0.39	153.80	.201E+04	0.9	0.66	35.52
01535>	0.49	153.90	.408E+04	2.1	0.71	33.15
01536>	0.59	153.99	.651E+04	3.7	0.81	29.01
01537>	0.69	154.09	.916E+04	6.1	0.93	25.22
01538>	0.79	154.19	.120E+05	8.9	1.05	22.39
01539>	0.88	154.29	.149E+05	12.3	1.16	20.20
01540>	0.98	154.39	.179E+05	16.2	1.27	18.49
01541>	1.08	154.49	.211E+05	20.5	1.37	17.13
01542>	1.18	154.58	.244E+05	25.4	1.47	16.02
01543>	1.28	154.68	.278E+05	30.7	1.56	15.10
01544>	1.37	154.78	.314E+05	36.4	1.63	14.38
01545>	1.47	154.88	.351E+05	42.5	1.71	13.77
01546>	1.57	154.98	.391E+05	48.9	1.76	13.33
01547>	1.67	155.07	.433E+05	55.6	1.81	12.98
01548>	1.77	155.17	.478E+05	63.0	1.86	12.65
01549>	1.86	155.27	.528E+05	69.8	1.86	12.62

01550>

		<---- hydrograph ---->			<-pipe / channel->
01551>						
01552>		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
01553>		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
01554>	INFLOW : ID= 2 (50130)	108.42	13.91	10.33	183.70	0.92	1.21
01555>	OUTFLOW: ID= 1 (60130)	108.42	13.21	10.67	183.69	0.91	1.19

01556>
01557>
01558>
01559> ---

01560> ---

01561> | CALIB |
01562> | STANDHYD (40140)| Area (ha)= 65.76
01563> |ID= 1 DT= 5.0 min | Total Imp(%)= 71.00 Dir. Conn.(%)= 61.00
01564> ---

			IMPERVIOUS	PERVIOUS (i)
01565>				
01566>	Surface Area	(ha)=	46.69	19.07
01567>	Dep. Storage	(mm)=	2.00	6.30
01568>	Average Slope	(%)=	1.30	1.30
01569>	Length	(m)=	662.12	66.00
01570>	Mannings n	=	0.015	0.290

01571>
01572> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.
01573>
01574>

01575> ---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
01576> hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
01577> 0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
01578> 0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
01579> 0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
01580> 0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
01581> 0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
01582> 0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
01583> 0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
01584> 0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
01585> 0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
01586> 0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
01587> 0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
01588> 1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
01589> 1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
01590> 1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
01591> 1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
01592> 1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
01593> 1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
01594> 1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
01595> 1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
01596> 1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
01597> 1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
01598> 1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
01599> 1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
01600> 2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
01601> 2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
01602> 2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
01603> 2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
01604> 2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
01605> 2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
01606> 2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
01607> 2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
01608> 2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
01609> 2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
01610> 2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
01611> 2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
01612> 3.000	6.35	6.083	13.97	9.167	12.70		
01613> 3.083	6.35	6.167	13.97	9.250	52.83		

01614>

01615>				
01616>	Max.Eff.Inten.(mm/hr)=	52.83	69.98	
01617>	over (min)	10.00	25.00	
01618>	Storage Coeff. (min)=	10.32 (ii)	24.00 (ii)	
01619>	Unit Hyd. Tpeak (min)=	10.00	25.00	
01620>	Unit Hyd. peak (cms)=	0.11	0.05	
01621>				*TOTALS*
01622>	PEAK FLOW (cms)=	5.87	3.36	9.175 (iii)
01623>	TIME TO PEAK (hrs)=	10.17	10.33	10.17
01624>	RUNOFF VOLUME (mm)=	210.34	188.59	201.86
01625>	TOTAL RAINFALL (mm)=	212.34	212.34	212.34
01626>	RUNOFF COEFFICIENT =	0.99	0.89	0.95

01627>
01628>
01629> (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01630> CN* = 90.0 Ia = Dep. Storage (Above)
01631> (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01632> THAN THE STORAGE COEFFICIENT.
01633> (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01634>
01635> ---

01636>
01637> ---

01638> | ADD HYD (50180)|
01639> | 1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
01640>	(ha)	(cms)	(hrs)	(mm)
01641> ID1= 1 (40140):	65.76	9.175	10.17	201.86
01642> + ID2= 2 (60130):	108.42	13.211	10.67	183.69
01643>	==========	==========	==========	==========
01644> ID = 3 (50180):	174.18	20.858	10.42	190.55

01645>
01646> NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01647> ---

01648> ---

01649> | CALIB |
01650> | STANDHYD (40180)| Area (ha)= 13.89
01651> |ID= 1 DT= 5.0 min | Total Imp(%)= 76.00 Dir. Conn.(%)= 73.00
01652> ---

			IMPERVIOUS	PERVIOUS (i)
01653>				
01654>	Surface Area	(ha)=	10.55	3.33
01655>	Dep. Storage	(mm)=	2.00	6.90
01656>	Average Slope	(%)=	1.00	1.00
01657>	Length	(m)=	304.26	66.00
01658>	Mannings n	=	0.015	0.310

01659>
01660> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.
01661>
01662>
01663> ---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
01664> hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
01665> 0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
01666> 0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
01667> 0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
01668> 0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
01669> 0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
01670> 0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
01671> 0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
01672> 0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
01673> 0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
01674> 0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
01675> 0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
01676> 1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
01677> 1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
01678> 1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
01679> 1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
01680> 1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
01681> 1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
01682> 1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
01683> 1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
01684> 1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
01685> 1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
01686> 1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
01687> 1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
01688> 2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
01689> 2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
01690> 2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
01691> 2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
01692> 2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
01693> 2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
01694> 2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
01695> 2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
01696> 2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
01697> 2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
01698> 2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
01699> 2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
01700> 3.000	6.35	6.083	13.97	9.167	12.70		
01701> 3.083	6.35	6.167	13.97	9.250	52.83		

01702>
01703>

01704>	Max.Eff.Inten.(mm/hr)=	52.83	58.17	
01705>	over (min)	5.00	25.00	
01706>	Storage Coeff. (min)=	7.01 (ii)	23.59 (ii)	
01707>	Unit Hyd. Tpeak (min)=	5.00	25.00	
01708>	Unit Hyd. peak (cms)=	0.17	0.05	
01709>				*TOTALS*
01710>	PEAK FLOW (cms)=	1.49	0.49	1.969 (iii)
01711>	TIME TO PEAK (hrs)=	10.17	10.33	10.17
01712>	RUNOFF VOLUME (mm)=	210.34	183.84	203.18
01713>	TOTAL RAINFALL (mm)=	212.34	212.34	212.34
01714>	RUNOFF COEFFICIENT =	0.99	0.87	0.96

01715>
01716>
01717> (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01718> CN* = 90.0 Ia = Dep. Storage (Above)
01719> (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01720> THAN THE STORAGE COEFFICIENT.
01721> (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01722>
01723> ---

01724> ---

01725> | CALIB |
01726> | STANDHYD (40190)| Area (ha)= 13.78
01727> |ID= 1 DT= 5.0 min | Total Imp(%)= 41.61 Dir. Conn.(%)= 38.64
01728> ---

			IMPERVIOUS	PERVIOUS (i)
01729>				
01730>	Surface Area	(ha)=	5.74	8.05
01731>	Dep. Storage	(mm)=	2.00	8.12
01732>	Average Slope	(%)=	2.40	2.40
01733>	Length	(m)=	303.13	131.00
01734>	Mannings n	=	0.015	0.350

01735>
01736> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.
01737>
01738>
01739> ---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
01740> hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
01741> 0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
01742> 0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
01743> 0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
01744> 0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
01745> 0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
01746> 0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
01747> 0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
01748> 0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
01749> 0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
01750> 0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
01751> 0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
01752> 1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
01753> 1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
01754> 1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
01755> 1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
01756> 1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
01757> 1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
01758> 1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
01759> 1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
01760> 1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
01761> 1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
01762> 1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
01763> 1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
01764> 2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
01765> 2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
01766> 2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
01767> 2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
01768> 2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
01769> 2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
01770> 2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
01771> 2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
01772> 2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
01773> 2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
01774> 2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
01775> 2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
01776> 3.000	6.35	6.083	13.97	9.167	12.70		
01777> 3.083	6.35	6.167	13.97	9.250	52.83		

01778>
01779>

01780>	Max.Eff.Inten.(mm/hr)=	52.83	53.85	
01781>	over (min)	5.00	30.00	
01782>	Storage Coeff. (min)=	5.38 (ii)	26.72 (ii)	
01783>	Unit Hyd. Tpeak (min)=	5.00	30.00	
01784>	Unit Hyd. peak (cms)=	0.21	0.04	
01785>				*TOTALS*
01786>	PEAK FLOW (cms)=	0.78	1.06	1.805 (iii)
01787>	TIME TO PEAK (hrs)=	10.17	10.42	10.17
01788>	RUNOFF VOLUME (mm)=	210.34	178.54	190.83
01789>	TOTAL RAINFALL (mm)=	212.34	212.34	212.34
01790>	RUNOFF COEFFICIENT =	0.99	0.84	0.90

01791>
01792>
01793> (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01794> CN* = 89.0 Ia = Dep. Storage (Above)
01795> (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01796> THAN THE STORAGE COEFFICIENT.
01797> (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01798>
01799> ---

01800> ---

01801> | ROUTE CHN(60190)|
01802> | IN= 2---> OUT= 1 | Routing time step (min)'= 5.00
01803> ---

01804> <------ DATA FOR SECTION (1.1) ------>

	Distance	Elevation	Manning	
01805>				
01806>	0.00	155.90	0.0450	
01807>	1.00	154.69	0.0450	
01808>	2.00	154.30	0.0450	
01809>	3.00	154.00	0.0450 /0.0350	Main Channel
01810>	4.00	153.74	0.0350	Main Channel
01811>	5.00	153.51	0.0350	Main Channel
01812>	6.00	153.46	0.0350	Main Channel
01813>	7.00	153.77	0.0350	Main Channel
01814>	8.00	154.10	0.0350 /0.0450	Main Channel
01815>	9.00	154.50	0.0450	
01816>	10.00	154.84	0.0450	
01817>	11.00	155.13	0.0450	
01818>	12.00	155.26	0.0450	
01819>	13.00	155.32	0.0450	
01820>	14.00	155.42	0.0450	
01821>	15.00	155.52	0.0450	
01822>	16.00	155.62	0.0450	
01823>	17.00	155.69	0.0450	
01824>	18.00	155.76	0.0450	
01825>	20.00	155.88	0.0450	

01826>
01827> <---------- TRAVEL TIME TABLE ---------->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
01828> (m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
01829> 0.11	153.57	.445E+02	0.0	0.32	21.18
01830> 0.22	153.68	.135E+03	0.2	0.51	13.45
01831> 0.33	153.79	.262E+03	0.4	0.66	10.46
01832> 0.43	153.89	.423E+03	0.8	0.79	8.73
01833> 0.54	154.00	.616E+03	1.3	0.90	7.61
01834> 0.68	154.14	.900E+03	2.4	1.09	6.30
01835> 0.81	154.27	.123E+04	3.8	1.27	5.40
01836>					

```
01837>        0.95   154.41    .160E+04       5.5          1.42       4.83
01838>        1.08   154.54    .201E+04       7.6          1.55       4.43
01839>        1.22   154.68    .246E+04       9.9          1.67       4.12
01840>        1.35   154.81    .294E+04      12.7          1.78       3.86
01841>        1.48   154.94    .345E+04      15.8          1.88       3.65
01842>        1.62   155.08    .400E+04      19.2          1.97       3.48
01843>        1.75   155.21    .458E+04      22.9          2.05       3.34
01844>        1.89   155.35    .524E+04      26.8          2.11       3.26
01845>        2.02   155.48    .599E+04      31.4          2.16       3.18
01846>        2.16   155.62    .682E+04      36.5          2.20       3.12
01847>        2.29   155.75    .774E+04      41.9          2.23       3.08
01848>        2.43   155.89    .878E+04      48.0          2.25       3.05
01849>
01850>                                    <---- hydrograph ---->   <-pipe / channel->
01851>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01852>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01853>    INFLOW : ID= 2 ( 40190)   13.78     1.80   10.17 190.83       0.60      0.98
01854>    OUTFLOW: ID= 1 ( 60190)   13.78     1.76   10.17 190.83       0.60      0.97
01855>
01856>
01857>
01858> ------------------------------------------------------------------------------
01859> --------------------
01860> | CALIB            |
01861> | STANDHYD ( 40200)|   Area    (ha)=  22.94
01862> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
01863> --------------------
01864>                              IMPERVIOUS    PERVIOUS (i)
01865>      Surface Area     (ha)=      17.41         5.53
01866>      Dep. Storage     (mm)=       2.00         6.75
01867>      Average Slope     (%)=       3.00         3.00
01868>      Length            (m)=     391.08       150.00
01869>      Mannings n           =      0.015        0.290
01870>
01871>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
01872>
01873>
01874>                          ---- TRANSFORMED HYETOGRAPH ----
01875>                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
01876>                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
01877>               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
01878>               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
01879>               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
01880>               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
01881>               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
01882>               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
01883>               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
01884>               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
01885>               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
01886>               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
01887>               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
01888>               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
01889>               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
01890>               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
01891>               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
01892>               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
01893>               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
01894>               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
01895>               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
01896>               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
01897>               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
01898>               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
01899>               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
01900>               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
01901>               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
01902>               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
01903>               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
01904>               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
01905>               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
01906>               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
01907>               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
01908>               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
01909>               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
01910>               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
01911>               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
01912>               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
01913>               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
01914>
01915>      Max.Eff.Inten.(mm/hr)=      52.83        54.01
01916>                 over (min)        5.00        30.00
01917>      Storage Coeff.  (min)=       5.86 (ii)   25.17 (ii)
01918>      Unit Hyd. Tpeak (min)=       5.00        30.00
01919>      Unit Hyd. peak  (cms)=       0.20         0.04
01920>                                                          *TOTALS*
01921>      PEAK FLOW       (cms)=       2.52         0.74         3.233 (iii)
01922>      TIME TO PEAK    (hrs)=      10.17        10.33        10.17
01923>      RUNOFF VOLUME    (mm)=     210.34       182.08       203.20
01924>      TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
01925>      RUNOFF COEFFICIENT   =       0.99         0.86         0.96
01926>
01927>
01928>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01929>            CN*  =  90.0    Ia = Dep. Storage  (Above)
01930>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01931>            THAN THE STORAGE COEFFICIENT.
01932>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01933>
01934> ------------------------------------------------------------------------------
01935>
01936> --------------------
01937> | ADD HYD  ( 50200)|
01938> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01939> --------------------         (ha)    (cms)    (hrs)     (mm)
01940>         ID1= 1 ( 40180):    13.89    1.969    10.17   203.18
01941>       + ID2= 2 ( 40200):    22.94    3.233    10.17   203.20
01942>         ================================================
01943>         ID = 3 ( 50200):    36.83    5.202    10.17   203.20
01944>
01945>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01946> ------------------------------------------------------------------------------
01947>
01948> --------------------
01949> | ADD HYD  ( 50200)|
01950> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
01951> --------------------         (ha)    (cms)    (hrs)     (mm)
01952>         ID1= 3 ( 50200):    36.83    5.202    10.17   203.20
01953>       + ID2= 2 ( 60190):    13.78    1.762    10.17   190.83
01954>         ================================================
01955>         ID = 1 ( 50200):    50.61    6.964    10.17   199.83
01956>
01957>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01958> ------------------------------------------------------------------------------
01959> --------------------
01960> | CALIB            |
01961> | STANDHYD ( 40210)|   Area    (ha)=   6.07
01962> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
01963> --------------------
01964>                              IMPERVIOUS    PERVIOUS (i)
01965>      Surface Area     (ha)=       5.01         1.06
01966>      Dep. Storage     (mm)=       2.00         6.27
01967>      Average Slope     (%)=       0.90         0.90
01968>      Length            (m)=     201.21       118.00
01969>      Mannings n           =      0.015        0.290
01970>
01971>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
01972>
01973>
01974>                          ---- TRANSFORMED HYETOGRAPH ----
01975>                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
01976>                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
01977>               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
01978>               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
01979>               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
01980>               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
01981>               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
01982>               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
01983>               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
01984>               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
01985>               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
01986>               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
01987>               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
01988>               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
01989>               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
01990>               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
01991>               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
01992>               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
01993>               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
01994>               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
01995>               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
01996>               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
01997>               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
01998>               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
01999>               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
02000>               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
02001>               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
02002>               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
02003>               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
02004>               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
02005>               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
02006>               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
02007>               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
02008>               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
02009>               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
02010>               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
02011>               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
02012>               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
02013>               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
02014>
02015>      Max.Eff.Inten.(mm/hr)=      52.83        53.69
02016>                 over (min)        5.00        30.00
02017>      Storage Coeff.  (min)=       5.64 (ii)   29.70 (ii)
02018>      Unit Hyd. Tpeak (min)=       5.00        30.00
02019>      Unit Hyd. peak  (cms)=       0.20         0.04
02020>                                                          *TOTALS*
02021>      PEAK FLOW       (cms)=       0.73         0.14         0.860 (iii)
02022>      TIME TO PEAK    (hrs)=      10.17        10.42        10.17
02023>      RUNOFF VOLUME    (mm)=     210.34       182.39       205.24
02024>      TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
02025>      RUNOFF COEFFICIENT   =       0.99         0.86         0.97
02026>
02027>
02028>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
02029>            CN*  =  90.0    Ia = Dep. Storage  (Above)
02030>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
02031>            THAN THE STORAGE COEFFICIENT.
02032>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02033>
02034> ------------------------------------------------------------------------------
02035>
02036> --------------------
02037> | ADD HYD  ( 50210)|
02038> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02039> --------------------         (ha)    (cms)    (hrs)     (mm)
02040>         ID1= 1 ( 40210):     6.07    0.860    10.17   205.24
02041>       + ID2= 2 ( 50200):    50.61    6.964    10.17   199.83
02042>         ================================================
02043>         ID = 3 ( 50210):    56.68    7.824    10.17   200.41
02044>
02045>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02046> ------------------------------------------------------------------------------
02047> --------------------
02048> | ROUTE CHN( 60210)|
02049> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
02050> --------------------
02051>                  <------ DATA FOR SECTION (   1.1) ------>
02052>                 Distance      Elevation       Manning
02053>                     0.00         152.62        0.0450
02054>                     7.00         152.39        0.0450
02055>                     8.00         152.02        0.0450
02056>                     9.00         151.48        0.0450
02057>                    10.00         151.01        0.0450
02058>                    11.00         150.56    0.0450 /0.0350  Main Channel
02059>                    12.00         150.38        0.0350      Main Channel
02060>                    13.00         150.40        0.0350      Main Channel
02061>                    14.00         150.36        0.0350      Main Channel
02062>                    15.00         150.60    0.0350 /0.0450  Main Channel
02063>                    16.00         150.99        0.0450
02064>                    17.00         151.50        0.0450
02065>                    18.00         151.91        0.0450
02066>                    19.00         152.65        0.0450
02067>
02068>       <---------- TRAVEL TIME TABLE ---------->
02069>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
02070>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
02071>         0.10  150.46    .580E+02        0.1         0.30      17.06
02072>         0.20  150.56    .160E+03        0.3         0.48      10.57
02073>         0.32  150.68    .314E+03        0.7         0.70       7.18
02074>         0.44  150.80    .489E+03        1.4         0.89       5.71
02075>         0.56  150.92    .686E+03        2.3         1.03       4.89
02076>         0.69  151.04    .904E+03        3.5         1.16       4.35
02077>         0.81  151.16    .114E+04        4.8         1.28       3.95
02078>         0.93  151.29    .140E+04        6.4         1.38       3.66
02079>         1.05  151.41    .167E+04        8.1         1.48       3.42
02080>         1.17  151.53    .196E+04       10.1         1.57       3.22
02081>         1.29  151.65    .227E+04       12.3         1.65       3.06
02082>         1.41  151.77    .260E+04       14.8         1.73       2.93
02083>         1.54  151.89    .295E+04       17.5         1.80       2.81
02084>         1.66  152.01    .331E+04       20.4         1.87       2.70
02085>         1.78  152.13    .369E+04       23.6         1.94       2.61
02086>         1.90  152.26    .409E+04       27.0         2.00       2.52
02087>         2.02  152.38    .451E+04       30.7         2.06       2.45
02088>         2.14  152.50    .500E+04       33.4         2.03       2.49
02089>         2.26  152.62    .563E+04       37.3         2.01       2.51
02090>
02091>                                    <---- hydrograph ---->   <-pipe / channel->
02092>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
02093>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
02094>    INFLOW : ID= 2 ( 50210)   56.68     7.82   10.17 200.41       1.03      1.46
02095>    OUTFLOW: ID= 1 ( 60210)   56.68     7.78   10.17 200.41       1.03      1.46
02096>
02097>
02098>
02099> ------------------------------------------------------------------------------
02100> --------------------
02101> | CALIB            |
02102> | STANDHYD ( 40220)|   Area    (ha)=  11.32
02103> |ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
02104> --------------------
02105>                              IMPERVIOUS    PERVIOUS (i)
02106>      Surface Area     (ha)=       8.91         2.40
02107>      Dep. Storage     (mm)=       2.00         6.17
02108>      Average Slope     (%)=       0.60         0.60
02109>      Length            (m)=     274.66        79.00
02110>      Mannings n           =      0.015        0.290
02111>
02112>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
02113>
02114>
02115>                          ---- TRANSFORMED HYETOGRAPH ----
02116>                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
02117>                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
02118>               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
02119>               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
02120>               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
02121>               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
02122>               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
02123>               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
02124>               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
02125>               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
02126>               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
02127>               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
02128>               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
02129>               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
02130>               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
02131>               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
02132>               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
02133>               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
02134>               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
02135>               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
02136>               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
02137>               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
02138>               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
02139>               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
02140>               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
02141>               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
02142>               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
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                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.98
                   over (min)       10.00        30.00
     Storage Coeff.  (min)=        7.68 (ii)   28.99 (ii)
     Unit Hyd. Tpeak (min)=       10.00        30.00
     Unit Hyd. peak  (cms)=        0.13         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.29         0.31          1.590 (iii)
     TIME TO PEAK    (hrs)=       10.17        10.42         10.17
     RUNOFF VOLUME    (mm)=      210.34       182.62        204.17
     TOTAL RAINFALL   (mm)=      212.34       212.34        212.34
     RUNOFF COEFFICIENT   =        0.99         0.86          0.96

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40220):    11.32    1.590    10.17   204.17
      + ID2= 2 ( 60210):    56.68    7.779    10.17   200.41
        ================================================
        ID = 3 ( 50120):    68.00    9.370    10.17   201.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| READ HYD (  0414)|   AREA       (ha)= 289.00
| DT= 5.0 min      |   TPEAK     (hrs)=  10.25
--------------------   VOLUME     (mm)=  28.88
  Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
  Comments: HYDROGRAPH from Area 4 2D model_Pond 804 east berm - updated

  TIME    FLOW |  TIME    FLOW |  TIME    FLOW |'  TIME    FLOW |  TIME    FLOW
   hrs     cms |   hrs     cms |   hrs     cms |'   hrs     cms |   hrs     cms
 0.00   0.000 |  4.83   0.219 |  9.67   4.326 | 14.50   0.000 | 19.33   0.000
 0.08   0.000 |  4.92   0.380 |  9.75   4.966 | 14.58   0.000 | 19.42   0.000
 0.17   0.000 |  5.00   0.517 |  9.83   5.613 | 14.67   0.000 | 19.50   0.000
 0.25   0.000 |  5.08   0.670 |  9.92   6.345 | 14.75   0.000 | 19.58   0.000
 0.33   0.000 |  5.17   0.805 | 10.00   7.412 | 14.83   0.000 | 19.67   0.000
 0.42   0.000 |  5.25   0.846 | 10.08   8.509 | 14.92   0.000 | 19.75   0.000
 0.50   0.000 |  5.33   0.850 | 10.17   8.992 | 15.00   0.000 | 19.83   0.000
 0.58   0.000 |  5.42   0.850 | 10.25   9.061 | 15.08   0.000 | 19.92   0.000
 0.67   0.000 |  5.50   0.848 | 10.33   8.959 | 15.17   0.000 | 20.00   0.000
 0.75   0.000 |  5.58   0.847 | 10.42   8.845 | 15.25   0.000 | 20.08   0.000
 0.83   0.000 |  5.67   0.848 | 10.50   8.727 | 15.33   0.000 | 20.17   0.000
 0.92   0.000 |  5.75   0.849 | 10.58   8.613 | 15.42   0.000 | 20.25   0.000
 1.00   0.000 |  5.83   0.852 | 10.67   8.510 | 15.50   0.000 | 20.33   0.000
 1.08   0.000 |  5.92   0.855 | 10.75   8.414 | 15.58   0.000 | 20.42   0.000
 1.17   0.000 |  6.00   0.858 | 10.83   8.327 | 15.67   0.000 | 20.50   0.000
 1.25   0.000 |  6.08   0.862 | 10.92   8.246 | 15.75   0.000 | 20.58   0.000
 1.33   0.000 |  6.17   0.882 | 11.00   8.170 | 15.83   0.000 | 20.67   0.000
 1.42   0.000 |  6.25   0.944 | 11.08   8.091 | 15.92   0.000 | 20.75   0.000
 1.50   0.000 |  6.33   1.047 | 11.17   7.859 | 16.00   0.000 | 20.83   0.000
 1.58   0.000 |  6.42   1.170 | 11.25   7.261 | 16.08   0.000 | 20.92   0.000
 1.67   0.000 |  6.50   1.301 | 11.33   6.410 | 16.17   0.000 | 21.00   0.000
 1.75   0.000 |  6.58   1.446 | 11.42   5.456 | 16.25   0.000 | 21.08   0.000
 1.83   0.000 |  6.67   1.582 | 11.50   4.646 | 16.33   0.000 | 21.17   0.000
 1.92   0.000 |  6.75   1.707 | 11.58   4.145 | 16.42   0.000 | 21.25   0.000
 2.00   0.000 |  6.83   1.824 | 11.67   3.772 | 16.50   0.000 | 21.33   0.000
 2.08   0.000 |  6.92   1.912 | 11.75   3.389 | 16.58   0.000 | 21.42   0.000
 2.17   0.000 |  7.00   1.969 | 11.83   2.994 | 16.67   0.000 | 21.50   0.000
 2.25   0.000 |  7.08   2.011 | 11.92   2.724 | 16.75   0.000 | 21.58   0.000
 2.33   0.000 |  7.17   2.026 | 12.00   2.503 | 16.83   0.000 | 21.67   0.000
 2.42   0.000 |  7.25   1.980 | 12.08   2.280 | 16.92   0.000 | 21.75   0.000
 2.50   0.000 |  7.33   1.896 | 12.17   2.038 | 17.00   0.000 | 21.83   0.000
 2.58   0.000 |  7.42   1.809 | 12.25   1.757 | 17.08   0.000 | 21.92   0.000
 2.67   0.000 |  7.50   1.736 | 12.33   1.485 | 17.17   0.000 | 22.00   0.000
 2.75   0.000 |  7.58   1.672 | 12.42   1.239 | 17.25   0.000 | 22.08   0.000
 2.83   0.000 |  7.67   1.602 | 12.50   1.003 | 17.33   0.000 | 22.17   0.000
 2.92   0.000 |  7.75   1.522 | 12.58   0.778 | 17.42   0.000 | 22.25   0.000
 3.00   0.000 |  7.83   1.440 | 12.67   0.582 | 17.50   0.000 | 22.33   0.000
 3.08   0.000 |  7.92   1.362 | 12.75   0.422 | 17.58   0.000 | 22.42   0.000
 3.17   0.000 |  8.00   1.297 | 12.83   0.305 | 17.67   0.000 | 22.50   0.000
 3.25   0.000 |  8.08   1.242 | 12.92   0.186 | 17.75   0.000 | 22.58   0.000
 3.33   0.000 |  8.17   1.191 | 13.00   0.128 | 17.83   0.000 | 22.67   0.000
 3.42   0.000 |  8.25   1.145 | 13.08   0.082 | 17.92   0.000 | 22.75   0.000
 3.50   0.000 |  8.33   1.105 | 13.17   0.045 | 18.00   0.000 | 22.83   0.000
 3.58   0.000 |  8.42   1.068 | 13.25   0.022 | 18.08   0.000 | 22.92   0.000
 3.67   0.000 |  8.50   1.035 | 13.33   0.013 | 18.17   0.000 | 23.00   0.000
 3.75   0.000 |  8.58   1.005 | 13.42   0.007 | 18.25   0.000 | 23.08   0.000
 3.83   0.000 |  8.67   0.977 | 13.50   0.003 | 18.33   0.000 | 23.17   0.000
 3.92   0.000 |  8.75   0.952 | 13.58   0.001 | 18.42   0.000 | 23.25   0.000
 4.00   0.000 |  8.83   0.930 | 13.67   0.000 | 18.50   0.000 | 23.33   0.000
 4.08   0.000 |  8.92   0.910 | 13.75   0.000 | 18.58   0.000 | 23.42   0.000
 4.17   0.000 |  9.00   0.893 | 13.83   0.000 | 18.67   0.000 | 23.50   0.000
 4.25   0.000 |  9.08   0.878 | 13.92   0.000 | 18.75   0.000 | 23.58   0.000
 4.33   0.000 |  9.17   0.938 | 14.00   0.000 | 18.83   0.000 | 23.67   0.000
 4.42   0.002 |  9.25   1.201 | 14.08   0.000 | 18.92   0.000 | 23.75   0.000
 4.50   0.008 |  9.33   1.748 | 14.17   0.000 | 19.00   0.000 | 23.83   0.000
 4.58   0.022 |  9.42   2.406 | 14.25   0.000 | 19.08   0.000 | 23.92   0.000
 4.67   0.069 |  9.50   3.002 | 14.33   0.000 | 19.17   0.000 | 24.00   0.000
 4.75   0.133 |  9.58   3.643 | 14.42   0.000 | 19.25   0.000 |

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--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0414):   289.00    9.061    10.25    28.88
      + ID2= 2 ( 50120):    68.00    9.370    10.17   201.03
        ================================================
        ID = 3 ( 50140):   357.00   18.362    10.17    61.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50140)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50140):   357.00   18.362    10.17    61.67
      + ID2= 2 ( 50180):   174.18   20.858    10.42   190.55
        ================================================
        ID = 1 ( 50140):   531.18   38.765    10.25   103.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.29        0.0450
                   2.00         152.20        0.0450
                   4.00         152.17        0.0450
                   6.00         152.15        0.0450
                   8.00         151.78        0.0450
                  10.00         151.28        0.0450
                  12.00         150.79        0.0450
                  14.00         150.20    0.0450 /0.0350  Main Channel
                  16.00         149.82        0.0350      Main Channel
                  18.00         149.51        0.0350      Main Channel
                  20.00         149.24        0.0350      Main Channel
                  22.00         149.48        0.0350      Main Channel
                  24.00         150.00    0.0350 /0.0450  Main Channel
                  26.00         150.52        0.0450
                  28.00         151.14        0.0450
                  30.00         151.68        0.0450
                  32.00         152.11        0.0450
                  34.00         152.20        0.0450
                  35.00         152.27        0.0450
                  38.00         152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
        0.15  149.39    .694E+02         0.1         0.32       19.63
        0.31  149.54    .273E+03         0.4         0.53       11.92
        0.46  149.70    .577E+03         1.1         0.72        8.87
        0.61  149.85    .972E+03         2.2         0.87        7.30
        0.76  150.00    .145E+04         3.9         1.01        6.26
        0.93  150.16    .205E+04         6.4         1.18        5.36
        1.09  150.33    .274E+04         9.9         1.37        4.62
        1.25  150.49    .350E+04        14.2         1.54        4.11
        1.42  150.65    .434E+04        19.3         1.69        3.75
        1.58  150.82    .524E+04        25.2         1.83        3.47
        1.74  150.98    .621E+04        31.8         1.95        3.26
        1.91  151.14    .726E+04        39.2         2.06        3.09
        2.07  151.31    .839E+04        47.5         2.16        2.94
        2.23  151.47    .959E+04        56.6         2.25        2.82
        2.40  151.63    .109E+05        66.7         2.34        2.72
        2.56  151.80    .122E+05        77.6         2.41        2.63
        2.72  151.96    .137E+05        89.3         2.48        2.55
        2.89  152.12    .153E+05       102.0         2.55        2.49
        3.05  152.29    .172E+05       111.6         2.47        2.57

                                        <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)  531.18    38.77   10.25 103.93      1.90      2.05
   OUTFLOW: ID= 1 ( 60140)  531.18    38.70   10.25 103.93      1.89      2.05

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| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         151.02        0.0450
                   2.00         150.89        0.0450
                   4.00         150.73        0.0450
                   6.00         150.65        0.0450
                   8.00         150.38        0.0450
                  10.00         149.93        0.0450
                  12.00         149.51        0.0450
                  14.00         149.02    0.0450 /0.0350  Main Channel
                  16.00         148.64        0.0350      Main Channel
                  18.00         148.27        0.0350      Main Channel
                  20.00         148.39        0.0350      Main Channel
                  22.00         148.60        0.0350      Main Channel
                  24.00         148.94    0.0350 /0.0450  Main Channel
                  26.00         149.34        0.0450
                  28.00         149.66        0.0450
                  30.00         150.12        0.0450
                  32.00         150.45        0.0450
                  34.00         150.52        0.0450
                  36.00         150.60        0.0450
                  38.00         150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
        0.11  148.38    .283E+02         0.0         0.26       13.34
        0.22  148.49    .107E+03         0.2         0.44        7.98
        0.34  148.60    .226E+03         0.6         0.58        6.07
        0.45  148.72    .380E+03         1.3         0.72        4.90
        0.56  148.83    .563E+03         2.2         0.84        4.20
        0.67  148.94    .775E+03         3.5         0.95        3.72
        0.80  149.07    .105E+04         5.5         1.11        3.17
        0.93  149.20    .136E+04         8.2         1.27        2.77
        1.06  149.32    .170E+04        11.3         1.41        2.50
        1.18  149.45    .207E+04        14.9         1.52        2.31
        1.31  149.58    .248E+04        19.1         1.63        2.17
        1.44  149.71    .292E+04        23.8         1.72        2.05
        1.57  149.83    .340E+04        29.1         1.81        1.95
        1.70  149.96    .391E+04        34.9         1.89        1.87
        1.82  150.09    .445E+04        41.4         1.97        1.79
        1.95  150.22    .502E+04        48.4         2.04        1.73
        2.08  150.35    .563E+04        56.0         2.10        1.67
        2.21  150.47    .628E+04        63.9         2.15        1.64
        2.33  150.60    .702E+04        71.1         2.14        1.64

                                        <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60140)  531.18    38.70   10.25 103.93      1.77      1.93
   OUTFLOW: ID= 1 ( 60150)  531.18    38.55   10.25 103.93      1.77      1.93

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| CALIB            |
| STANDHYD ( 40150)|   Area     (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          3.11          2.26
     Dep. Storage     (mm)=          2.00          6.34
     Average Slope     (%)=          2.30          2.30
     Length            (m)=        189.18         45.00
     Mannings n           =         0.015         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
     hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
   0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
   0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
   0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
   0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
   0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
   0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
   0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
   0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
   0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
   0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
   0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
   1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
   1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
   1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
   1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
   1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
   1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
   1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
   1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
   1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
   1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
   1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
   1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
   2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
   2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
   2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
   2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
   2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
   2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
   2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
   2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
   2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
   2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
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                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        58.80
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.10 (ii)   13.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.24         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.41         0.36          0.773 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       184.57         198.00
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.87           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40150):     5.37    0.773    10.17   198.00
     + ID2= 2 ( 60150):   531.18   38.547    10.25   103.93
       ==================================================
       ID = 3 ( 50160):   536.54   39.232    10.25   104.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| STANDHYD ( 40240)|   Area    (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.79         1.50
     Dep. Storage     (mm)=       2.00         5.70
     Average Slope     (%)=       3.40         3.40
     Length            (m)=     261.85        70.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.60
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.43 (ii)   15.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.28         0.21          1.496 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       182.85         206.18
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.86           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40250)|   Area    (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.61         4.75
     Dep. Storage     (mm)=       2.00         7.14
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     298.43        70.00
     Mannings n           =      0.015        0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.56
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       5.62 (ii)   20.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.20         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.23         0.66          1.883 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25          10.17
     RUNOFF VOLUME    (mm)=     210.34       179.26         198.80
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.84           0.94


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        155.56        0.0450
                    2.00        155.23        0.0450
                    4.00        154.58        0.0450
                    6.00        153.92        0.0450
                    8.00        153.53        0.0450
                   10.00        152.64        0.0450
                   12.00        152.43    0.0450 /0.0350  Main Channel
                   14.00        152.24        0.0350      Main Channel
                   16.00        152.07        0.0350      Main Channel
                   18.00        152.30    0.0350 /0.0450  Main Channel
                   20.00        152.46        0.0450
                   22.00        155.55        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.12   152.18    .895E+02        0.1         0.43       24.33
        0.24   152.30    .356E+03        0.4         0.69       15.20
        0.43   152.49    .118E+04        2.1         1.10        9.55
        0.62   152.68    .234E+04        5.5         1.48        7.09
        0.81   152.88    .361E+04       10.4         1.83        5.76
        1.00   153.07    .494E+04       16.7         2.13        4.94
        1.19   153.26    .634E+04       24.2         2.40        4.38
        1.38   153.45    .781E+04       32.8         2.65        3.97
        1.58   153.64    .936E+04       42.5         2.86        3.67
        1.77   153.83    .110E+05       53.3         3.05        3.45
        1.96   154.02    .128E+05       65.6         3.23        3.26
        2.15   154.21    .147E+05       79.4         3.40        3.09
        2.34   154.40    .167E+05       94.5         3.57        2.95
        2.53   154.60    .188E+05      111.0         3.73        2.82
        2.72   154.79    .209E+05      128.7         3.89        2.71
        2.91   154.98    .231E+05      147.8         4.03        2.61
        3.10   155.17    .255E+05      168.3         4.17        2.52
        3.30   155.36    .279E+05      189.2         4.28        2.46
        3.49   155.55    .305E+05      211.3         4.38        2.40

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     1.88   10.17 198.80      0.41      1.04
   OUTFLOW: ID= 1 ( 60240)   13.36     1.87   10.17 198.80      0.41      1.03


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--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40240):    10.28    1.496    10.17   206.18
     + ID2= 2 ( 50160):   536.54   39.232    10.25   104.88
       ==================================================
       ID = 3 ( 50250):   546.83   40.482    10.25   106.78

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50250):   546.83   40.482    10.25   106.78
     + ID2= 2 ( 60240):    13.36    1.868    10.17   198.80
       ==================================================
       ID = 1 ( 50250):   560.19   42.290    10.25   108.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        149.47        0.0450
                    3.00        149.39        0.0450
                    6.00        149.18        0.0450
                    9.00        148.85        0.0450
                   12.00        148.60        0.0450
                   15.00        148.16        0.0450
                   18.00        147.81        0.0450
                   21.00        147.50        0.0450
                   24.00        147.26        0.0350      Main Channel
                   27.00        146.88        0.0350      Main Channel
                   30.00        146.72        0.0350      Main Channel
                   33.00        147.27    0.0350 /0.0450  Main Channel
                   36.00        147.60        0.0450
                   39.00        147.71        0.0450
                   42.00        148.10        0.0450
                   45.00        148.90        0.0450
                   48.00        149.05        0.0450
                   51.00        149.12        0.0450
                   54.00        149.43        0.0450
                   57.00        149.67        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.14   146.85    .156E+03        0.1         0.30       40.24
        0.27   146.99    .583E+03        0.4         0.51       23.51
        0.41   147.13    .119E+04        1.1         0.68       17.78
        0.54   147.26    .198E+04        2.2         0.82       14.76
        0.69   147.41    .309E+04        4.3         1.02       11.88
        0.84   147.56    .455E+04        7.2         1.15       10.50
        0.98   147.70    .637E+04       10.9         1.24        9.73
        1.13   147.85    .862E+04       15.8         1.32        9.12
        1.28   148.00    .111E+05       21.7         1.41        8.55
        1.42   148.14    .139E+05       28.7         1.50        8.06
```

	1.57	148.29	.169E+05	37.1	1.59	7.58
	1.72	148.44	.200E+05	46.5	1.68	7.16
	1.87	148.58	.233E+05	57.0	1.77	6.80
	2.01	148.73	.268E+05	68.3	1.85	6.53
	2.16	148.88	.305E+05	80.9	1.92	6.28
	2.31	149.02	.345E+05	93.2	1.95	6.17
	2.45	149.17	.391E+05	106.6	1.97	6.11
	2.60	149.32	.441E+05	123.2	2.02	5.97
	2.75	149.47	.495E+05	139.7	2.04	5.91

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (50250)	560.19	42.29	10.25	108.98	1.65	1.64
OUTFLOW: ID= 1 (60250)	560.19	41.51	10.33	108.98	1.64	1.63

CALIB			
STANDHYD (40270)	Area (ha)=	28.45	
ID= 1 DT= 5.0 min	Total Imp(%)=	56.00	Dir. Conn.(%)= 43.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	15.93	12.52
Dep. Storage	(mm)=	2.00	6.70
Average Slope	(%)=	1.30	1.30
Length	(m)=	435.49	46.00
Mannings n	=	0.015	0.300

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	67.11
over	(min)	10.00	20.00
Storage Coeff.	(min)=	8.03 (ii)	19.46 (ii)
Unit Hyd. Tpeak	(min)=	10.00	20.00
Unit Hyd. peak	(cms)=	0.13	0.06
PEAK FLOW	(cms)=	1.79	2.20	3.987 (iii)
TIME TO PEAK	(hrs)=	10.17	10.25	10.17
RUNOFF VOLUME	(mm)=	210.34	185.47	196.17
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.87	0.92

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50260)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40260):	28.45	3.987	10.17	196.17
+ ID2= 2 (60250):	560.19	41.511	10.33	108.98
ID = 3 (50260):	588.64	45.184	10.33	113.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60260)		
IN= 2---> OUT= 1	Routing time step (min)'=	5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	143.17	0.0450	
4.00	143.15	0.0450	
8.00	143.14	0.0450	
12.00	142.95	0.0450	
16.00	142.87	0.0450	
20.00	142.67	0.0450	
24.00	142.24	0.0450	
28.00	141.84	0.0450	
32.00	141.61	0.0450	
36.00	141.32	0.0450	
40.00	140.98	0.0450	
44.00	140.88	0.0450	
48.00	139.95	0.0350	Main Channel
52.00	140.09	0.0350	Main Channel
56.00	141.11	0.0450	
60.00	141.43	0.0450	
76.00	143.21	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	140.12	.479E+03	0.2	0.48	36.89
0.34	140.29	.147E+04	1.2	0.86	20.63
0.51	140.46	.272E+04	2.9	1.12	15.78
0.68	140.63	.421E+04	5.3	1.33	13.28
0.85	140.80	.596E+04	8.5	1.51	11.69
1.02	140.97	.812E+04	12.0	1.56	11.29
1.19	141.14	.111E+05	17.6	1.68	10.52
1.36	141.31	.147E+05	25.4	1.83	9.67
1.53	141.48	.191E+05	34.9	1.93	9.14
1.70	141.65	.242E+05	46.4	2.03	8.71
1.87	141.81	.301E+05	59.9	2.11	8.38
2.04	141.98	.367E+05	76.6	2.21	7.99
2.21	142.15	.439E+05	95.9	2.31	7.63
2.37	142.32	.517E+05	117.9	2.42	7.30
2.54	142.49	.600E+05	142.7	2.52	7.01
2.71	142.66	.689E+05	170.3	2.62	6.74
2.88	142.83	.785E+05	198.2	2.68	6.60
3.05	143.00	.892E+05	225.9	2.68	6.58
3.22	143.17	.101E+06	250.7	2.63	6.73

	1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
	1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
	1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
	3.000	6.35	6.083	13.97	9.167	12.70		
	3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	59.35
over	(min)	5.00	25.00
Storage Coeff.	(min)=	6.14 (ii)	23.77 (ii)
Unit Hyd. Tpeak	(min)=	5.00	25.00
Unit Hyd. peak	(cms)=	0.19	0.05
PEAK FLOW	(cms)=	0.32	1.00	1.306 (iii)
TIME TO PEAK	(hrs)=	10.17	10.33	10.17
RUNOFF VOLUME	(mm)=	210.34	185.46	190.94
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.87	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 91.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50270)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40270):	9.83	1.306	10.17	190.94
+ ID2= 2 (60260):	588.64	44.406	10.50	113.19
ID = 3 (50270):	598.47	45.607	10.50	114.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (40280)	Area (ha)=	31.30	
ID= 1 DT= 5.0 min	Total Imp(%)=	64.40	Dir. Conn.(%)= 51.66

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.16	11.14
Dep. Storage	(mm)=	2.00	7.27
Average Slope	(%)=	1.10	1.10
Length	(m)=	456.83	53.00
Mannings n	=	0.015	0.310

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
03061>
03062>      Max.Eff.Inten.(mm/hr)=      52.83        70.22
03063>                   over (min)      10.00        25.00
03064>      Storage Coeff.  (min)=       8.69 (ii)   21.79 (ii)
03065>      Unit Hyd. Tpeak (min)=      10.00        25.00
03066>      Unit Hyd. peak  (cms)=       0.12         0.05
03067>                                                          *TOTALS*
03068>      PEAK FLOW       (cms)=       2.37         2.00          4.346 (iii)
03069>      TIME TO PEAK    (hrs)=      10.17        10.25          10.17
03070>      RUNOFF VOLUME    (mm)=     210.34       184.28         197.74
03071>      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
03072>      RUNOFF COEFFICIENT   =       0.99         0.87           0.93
03073>
03074>
03075>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
03076>            CN*  =  88.0    Ia = Dep. Storage  (Above)
03077>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
03078>            THAN THE STORAGE COEFFICIENT.
03079>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03080>
03081> --------------------------------------------------------------------------------
03082>
03083> --------------------
03084> | ADD HYD  ( 50280)|
03085> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03086> --------------------         (ha)    (cms)    (hrs)     (mm)
03087>        ID1= 1 ( 40280):    31.30   4.346    10.17   197.74
03088>      + ID2= 2 ( 50270):   598.47  45.607    10.50   114.47
03089>        ================================================
03090>        ID = 3 ( 50280):   629.77  49.322    10.50   118.61
03091>
03092>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03093> --------------------------------------------------------------------------------
03094> --------------------
03095> | ROUTE CHN( 60280)|
03096> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
03097> --------------------
03098>                <------ DATA FOR SECTION (   1.1) ------>
03099>                Distance      Elevation       Manning
03100>                    0.00         139.35        0.0450
03101>                    3.00         139.19        0.0450
03102>                    6.00         138.46        0.0450
03103>                   27.00         137.71        0.0450
03104>                   30.00         137.44        0.0350      Main Channel
03105>                   33.00         137.26        0.0350      Main Channel
03106>                   36.00         137.51        0.0350      Main Channel
03107>                   39.00         137.64    0.0350 /0.0450  Main Channel
03108>                   42.00         137.71        0.0450
03109>                   57.00         139.35        0.0450
03110>
03111>       <---------------------- TRAVEL TIME TABLE ---------------------->
03112>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
03113>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
03114>         0.09  137.35    .361E+02        0.0          0.30      17.09
03115>         0.18  137.44    .145E+03        0.2          0.48      10.76
03116>         0.30  137.55    .369E+03        0.8          0.68       7.57
03117>         0.41  137.67    .717E+03        1.9          0.82       6.28
03118>         0.52  137.78    .124E+04        3.9          0.97       5.27
03119>         0.63  137.89    .192E+04        6.8          1.10       4.67
03120>         0.74  138.00    .273E+04       10.7          1.20       4.25
03121>         0.86  138.11    .369E+04       15.7          1.30       3.93
03122>         0.97  138.23    .480E+04       21.8          1.39       3.67
03123>         1.08  138.34    .605E+04       29.1          1.48       3.46
03124>         1.19  138.45    .745E+04       37.8          1.56       3.28
03125>         1.31  138.56    .895E+04       48.6          1.67       3.07
03126>         1.42  138.68    .105E+05       60.8          1.78       2.88
03127>         1.53  138.79    .121E+05       74.4          1.89       2.71
03128>         1.64  138.90    .138E+05       89.3          1.99       2.57
03129>         1.76  139.01    .155E+05      105.5          2.10       2.44
03130>         1.87  139.13    .172E+05      123.0          2.19       2.33
03131>         1.98  139.24    .190E+05      140.8          2.27       2.25
03132>         2.09  139.35    .209E+05      159.0          2.33       2.20
03133>
03134>                                    <---- hydrograph ---->   <-pipe / channel->
03135>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
03136>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
03137>    INFLOW : ID= 2 ( 50280)  629.77    49.32   10.50 118.61       1.31       1.67
03138>    OUTFLOW: ID= 1 ( 60280)  629.77    49.30   10.50 118.61       1.31       1.67
03139>
03140>
03141>
03142> --------------------------------------------------------------------------------
03143> --------------------
03144> | CALIB            |
03145> | STANDHYD ( 40300)|   Area     (ha)=  11.53
03146> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
03147> --------------------
03148>                                IMPERVIOUS    PERVIOUS (i)
03149>      Surface Area     (ha)=       6.71          4.81
03150>      Dep. Storage     (mm)=       2.00          7.99
03151>      Average Slope     (%)=       1.60          1.60
03152>      Length            (m)=     277.19         63.00
03153>      Mannings n           =      0.015         0.340
03154>
03155>         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
03156>
03157>
03158>                              ---- TRANSFORMED HYETOGRAPH ----
03159>                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
03160>                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
03161>               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
03162>               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
03163>               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
03164>               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
03165>               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
03166>               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
03167>               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
03168>               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
03169>               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
03170>               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
03171>               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
03172>               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
03173>               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
03174>               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
03175>               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
03176>               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
03177>               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
03178>               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
03179>               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
03180>               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
03181>               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
03182>               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
03183>               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
03184>               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
03185>               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
03186>               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
03187>               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
03188>               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
03189>               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
03190>               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
03191>               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
03192>               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
03193>               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
03194>               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
03195>               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
03196>               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
03197>               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
03198>
03199>      Max.Eff.Inten.(mm/hr)=      52.83        68.10
03200>                   over (min)      5.00        20.00
03201>      Storage Coeff.  (min)=       5.75 (ii)   19.65 (ii)
03202>      Unit Hyd. Tpeak (min)=       5.00        20.00
03203>      Unit Hyd. peak  (cms)=       0.20         0.06
03204>                                                          *TOTALS*
03205>      PEAK FLOW       (cms)=       0.76         0.86          1.614 (iii)
03206>      TIME TO PEAK    (hrs)=      10.17        10.25          10.17
03207>      RUNOFF VOLUME    (mm)=     210.34       182.98         195.28
03208>      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
03209>      RUNOFF COEFFICIENT   =       0.99         0.86           0.92
03210>
03211>
03212>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
03213>            CN*  =  88.0    Ia = Dep. Storage  (Above)
03214>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
03215>            THAN THE STORAGE COEFFICIENT.
03216>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03217>
03218> --------------------------------------------------------------------------------
03219>
03220> --------------------
03221> | ADD HYD  ( 50300)|
03222> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03223> --------------------         (ha)    (cms)    (hrs)     (mm)
03224>        ID1= 1 ( 40300):    11.53    1.614    10.17   195.28
03225>      + ID2= 2 ( 60280):   629.77   49.296    10.50   118.61
03226>        ================================================
03227>        ID = 3 ( 50300):   641.30   50.629    10.50   119.98
03228>
03229>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03230> --------------------------------------------------------------------------------
03231> --------------------
03232> | ROUTE CHN( 60300)|
03233> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
03234> --------------------
03235>                <------ DATA FOR SECTION (   1.1) ------>
03236>                Distance      Elevation       Manning
03237>                    0.00         137.26        0.0450
03238>                    4.00         136.94        0.0450
03239>                    8.00         136.82        0.0450
03240>                   12.00         136.69        0.0450
03241>                   16.00         136.55        0.0450
03242>                   36.00         135.52        0.0350      Main Channel
03243>                   64.00         136.21        0.0450
03244>                   75.00         136.49        0.0450
03245>                   84.00         137.21        0.0450
03246>
03247>       <---------------------- TRAVEL TIME TABLE ---------------------->
03248>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
03249>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
03250>         0.09  135.61    .491E+02        0.1          0.26      12.99
03251>         0.18  135.70    .196E+03        0.4          0.42       8.18
03252>         0.27  135.79    .442E+03        1.2          0.55       6.24
03253>         0.36  135.88    .785E+03        2.5          0.66       5.15
03254>         0.45  135.97    .123E+04        4.6          0.77       4.44
03255>         0.53  136.06    .177E+04        7.5          0.87       3.93
03256>         0.62  136.15    .240E+04       11.3          0.96       3.55
03257>         0.71  136.24    .314E+04       16.4          1.07       3.19
03258>         0.80  136.32    .397E+04       23.3          1.20       2.84
03259>         0.89  136.41    .490E+04       31.4          1.32       2.60
03260>         0.98  136.50    .592E+04       40.8          1.42       2.41
03261>         1.07  136.59    .701E+04       51.5          1.51       2.27
03262>         1.16  136.68    .816E+04       63.4          1.59       2.14
03263>         1.25  136.77    .938E+04       76.6          1.67       2.04
03264>         1.34  136.86    .107E+05       91.2          1.75       1.95
03265>         1.42  136.95    .120E+05      107.3          1.83       1.87
03266>         1.51  137.04    .135E+05      125.8          1.91       1.78
03267>         1.60  137.13    .149E+05      145.6          2.00       1.71
03268>         1.69  137.22    .164E+05      166.8          2.08       1.64
03269>
03270>                                    <---- hydrograph ---->   <-pipe / channel->
03271>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
03272>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
03273>    INFLOW : ID= 2 ( 50300)  641.30    50.63   10.50 119.98       1.06       1.50
03274>    OUTFLOW: ID= 1 ( 60300)  641.30    50.59   10.50 119.98       1.06       1.50
03275>
03276>
03277>
03278> --------------------------------------------------------------------------------
03279> --------------------
03280> | CALIB            |
03281> | STANDHYD ( 40290)|   Area     (ha)=   9.17
03282> |ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
03283> --------------------
03284>                                IMPERVIOUS    PERVIOUS (i)
03285>      Surface Area     (ha)=       2.77          6.39
03286>      Dep. Storage     (mm)=       2.00          8.38
03287>      Average Slope     (%)=       3.20          3.20
03288>      Length            (m)=     247.21         43.00
03289>      Mannings n           =      0.015         0.350
03290>
03291>         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
03292>
03293>
03294>                              ---- TRANSFORMED HYETOGRAPH ----
03295>                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
03296>                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
03297>               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
03298>               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
03299>               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
03300>               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
03301>               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
03302>               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
03303>               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
03304>               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
03305>               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
03306>               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
03307>               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
03308>               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
03309>               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
03310>               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
03311>               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
03312>               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
03313>               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
03314>               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
03315>               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
03316>               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
03317>               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
03318>               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
03319>               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
03320>               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
03321>               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
03322>               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
03323>               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
03324>               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
03325>               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
03326>               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
03327>               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
03328>               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
03329>               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
03330>               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
03331>               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
03332>               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
03333>               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
03334>
03335>      Max.Eff.Inten.(mm/hr)=      52.83        56.69
03336>                   over (min)      5.00        15.00
03337>      Storage Coeff.  (min)=       4.36 (ii)   14.19 (ii)
03338>      Unit Hyd. Tpeak (min)=       5.00        15.00
03339>      Unit Hyd. peak  (cms)=       0.23         0.08
03340>                                                          *TOTALS*
03341>      PEAK FLOW       (cms)=       0.32         0.99          1.302 (iii)
03342>      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
03343>      RUNOFF VOLUME    (mm)=     210.34       181.84         188.54
03344>      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
03345>      RUNOFF COEFFICIENT   =       0.99         0.86           0.89
03346>
03347> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
03348>
03349>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
03350>            CN*  =  90.0    Ia = Dep. Storage  (Above)
03351>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
03352>            THAN THE STORAGE COEFFICIENT.
03353>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03354>
03355> --------------------------------------------------------------------------------
03356>
03357> --------------------
03358> | ADD HYD  ( 50340)|
03359> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03360> --------------------         (ha)    (cms)    (hrs)     (mm)
03361>        ID1= 1 ( 40290):     9.17    1.302    10.17   188.54
03362>      + ID2= 2 ( 60300):   641.30   50.585    10.50   119.98
03363>        ================================================
03364>        ID = 3 ( 50340):   650.46   51.639    10.50   120.95
03365>
03366>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   924.28  51.590    11.08    80.96
      + ID2= 2 ( 50340):   650.46  51.639    10.50   120.95
        ================================================
        ID = 3 ( 50350):  1574.75 101.036    10.92    97.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        134.05        0.0450
                   24.00        133.67        0.0450
                   30.00        131.85        0.0450
                   36.00        131.42        0.0450
                   42.00        130.48        0.0450
                   48.00        130.42        0.0350      Main Channel
                   54.00        130.42        0.0350      Main Channel
                   60.00        130.62        0.0450
                   66.00        130.77        0.0450
                   72.00        131.03        0.0450
                   78.00        131.43        0.0450
                   84.00        131.38        0.0450
                   90.00        131.33        0.0450
                   96.00        131.98        0.0450
                  102.00        133.31        0.0450
                  120.00        133.95        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.00   130.42    .133E+02       0.0         0.03     768.63
         0.19   130.61    .383E+04       1.6         0.61      40.07
         0.37   130.79    .994E+04       6.6         0.97      25.18
         0.56   130.98    .179E+05      15.1         1.23      19.81
         0.75   131.16    .272E+05      27.2         1.46      16.72
         0.93   131.35    .377E+05      42.2         1.64      14.88
         1.12   131.54    .521E+05      60.9         1.71      14.26
         1.30   131.72    .683E+05      87.2         1.86      13.07
         1.49   131.91    .857E+05     119.1         2.03      11.99
         1.68   132.09    .104E+06     157.8         2.22      10.96
         1.86   132.28    .122E+06     201.6         2.41      10.11
         2.05   132.47    .141E+06     250.1         2.59       9.41
         2.23   132.65    .160E+06     303.1         2.76       8.82
         2.42   132.84    .180E+06     360.6         2.93       8.32
         2.61   133.02    .200E+06     422.5         3.08       7.90
         2.79   133.21    .221E+06     488.7         3.24       7.53
         2.98   133.40    .242E+06     552.2         3.34       7.29
         3.16   133.58    .264E+06     613.6         3.40       7.17
         3.35   133.77    .288E+06     658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350) 1574.75   101.04   10.92  97.48       1.39      1.93
   OUTFLOW: ID= 1 ( 60350) 1574.75   100.29   11.17  97.47       1.38      1.93


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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.47   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.170

     PEAK FLOW       (cms)=   0.205 (i)
     TIME TO PEAK    (hrs)=  10.250
     RUNOFF VOLUME    (mm)= 190.301
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.78   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.199

     PEAK FLOW       (cms)=   0.112 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.254
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.891

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.14   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.292

     PEAK FLOW       (cms)=   0.304 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.255
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.67   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.122

     PEAK FLOW       (cms)=   0.097 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.052
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      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.895

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.67   0.097    10.17   190.05
      + ID2= 2 (******):     2.14   0.304    10.17   190.26
        ==========================================================
        ID = 3 (******):     2.81   0.401    10.17   190.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.81   0.401    10.17   190.21
      + ID2= 2 (******):     0.78   0.112    10.17   189.25
        ==========================================================
        ID = 1 (******):     3.59   0.513    10.17   190.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.59   0.513    10.17   190.00
      + ID2= 2 (******):     1.47   0.205    10.25   190.30
        ==========================================================
        ID = 3 (******):     5.06   0.717    10.17   190.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.67   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Unit Hyd Qpeak  (cms)=   0.340

      PEAK FLOW       (cms)=   0.377 (i)
      TIME TO PEAK    (hrs)=  10.167
      RUNOFF VOLUME    (mm)= 190.278
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.896

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.22   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Unit Hyd Qpeak  (cms)=   0.314

      PEAK FLOW       (cms)=   0.317 (i)
      TIME TO PEAK    (hrs)=  10.167
      RUNOFF VOLUME    (mm)= 190.240
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.896

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.67   0.377    10.17   190.28
      + ID2= 2 (******):     2.22   0.317    10.17   190.24
        ==========================================================
        ID = 3 (******):     4.89   0.693    10.17   190.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   4.89      0.69      10.17   190.26
     ==========================================================
     ID= 2  (   2)    :   2.44      0.35      10.17   190.26
     ID= 3  (   2)    :   2.44      0.35      10.17   190.26
     ID= 4  (   2)    :   0.00      0.00       0.00     0.00
     ID= 5  (   2)    :   0.00      0.00       0.00     0.00
     ID= 6  (   2)    :   0.00      0.00       0.00     0.00
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.03   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Unit Hyd Qpeak  (cms)=   0.164

      PEAK FLOW       (cms)=   0.148 (i)
      TIME TO PEAK    (hrs)=  10.167
      RUNOFF VOLUME    (mm)= 190.174
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.896

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.148    10.17   190.17
      + ID2= 2 (******):     2.44   0.347    10.17   190.26
        ==========================================================
        ID = 3 (******):     3.48   0.495    10.17   190.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.15   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
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                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.480

     PEAK FLOW       (cms)=   0.578 (i)
     TIME TO PEAK    (hrs)=  10.250
     RUNOFF VOLUME    (mm)= 190.301
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.037 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 188.924
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.890

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.15   0.578    10.25   190.30
      + ID2= 2 (******):     0.26   0.037    10.17   188.92
        ================================================
        ID = 3 (******):     4.41   0.614    10.17   190.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.41   0.614    10.17   190.22
      + ID2= 2 (******):     3.48   0.495    10.17   190.24
        ================================================
        ID = 1 (******):     7.89   1.109    10.17   190.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     7.89   1.109    10.17   190.23
      + ID2= 2 (******):     5.06   0.717    10.17   190.09
        ================================================
        ID = 3 ( 50360):    12.95   1.826    10.17   190.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50360):    12.95   1.826    10.17   190.17
      + ID2= 2 ( 60350):  1574.75 100.289    11.17    97.47
        ================================================
        ID = 1 ( 50360):  1587.69 101.652    11.17    98.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.30        0.0450
                   6.00         127.39        0.0450
                  12.00         127.46        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04        0.0450
                  72.00         123.15        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   122.98    .246E+03        0.4         0.31      10.02
        0.33   123.21    .251E+04       11.8         0.86       3.57
        0.56   123.45    .538E+04       39.9         1.37       2.25
        0.80   123.68    .842E+04       81.1         1.78       1.73
        1.04   123.92    .116E+05      134.5         2.13       1.44
        1.27   124.16    .150E+05      200.0         2.46       1.25
        1.51   124.39    .185E+05      278.3         2.78       1.11
        1.74   124.63    .220E+05      367.4         3.08       1.00
        1.98   124.86    .257E+05      466.7         3.35       0.92
        2.22   125.10    .294E+05      576.1         3.61       0.85
        2.45   125.34    .332E+05      695.4         3.86       0.80
        2.69   125.57    .371E+05      824.8         4.10       0.75
        2.92   125.81    .410E+05      963.8         4.33       0.71
        3.16   126.04    .451E+05     1112.3         4.55       0.68
        3.39   126.28    .492E+05     1270.1         4.76       0.65
        3.63   126.51    .534E+05     1437.3         4.97       0.62
        3.87   126.75    .576E+05     1613.7         5.16       0.60
        4.10   126.99    .620E+05     1791.1         5.33       0.58
        4.34   127.22    .665E+05     1970.4         5.47       0.56

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)     (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50360) 1587.69   101.65    11.17   98.23       0.89       1.90
   OUTFLOW: ID= 1 ( 60390) 1587.69   101.67    11.17   98.23       0.89       1.90

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number   (CN)= 90.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   2.920 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 178.739
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.842

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40390):    20.55   2.920    10.17   178.74
      + ID2= 2 ( 60390):  1587.69 101.668    11.17    98.23
        ================================================
        ID = 3 ( 50390):  1608.24 103.787    11.17    99.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83          6.10
     Dep. Storage     (mm)=       2.00          6.08
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     345.74         42.00
     Mannings n           =      0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
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                1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
                1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        73.21
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       6.70 (ii)   16.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.38         1.19          2.571 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       191.50        201.36
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.90          0.95

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  91.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        127.70        0.0450
                  18.00        126.87        0.0450
                  24.00        125.30        0.0450
                  30.00        123.90        0.0450
                  36.00        123.14        0.0450
                  42.00        123.07        0.0450
                  48.00        122.88        0.0450
                  54.00        122.90        0.0450
                  60.00        122.95        0.0450
                  66.00        123.04    0.0450 /0.0350  Main Channel
                  72.00        122.86        0.0350      Main Channel
                  78.00        122.98        0.0450
                  84.00        122.97        0.0450
                  90.00        122.96        0.0450
                  96.00        122.92        0.0450
                 102.00        123.50        0.0450
                 108.00        124.18        0.0450
                 120.00        127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  122.98    .275E+03        0.7         0.35       6.78
        0.36  123.21    .218E+04       14.7         0.95       2.47
        0.59  123.45    .437E+04       44.6         1.44       1.63
        0.83  123.68    .670E+04       87.2         1.84       1.28
        1.06  123.92    .916E+04      141.6         2.19       1.08
        1.30  124.16    .117E+05      208.1         2.51       0.94
        1.54  124.39    .144E+05      287.0         2.82       0.84
        1.77  124.63    .171E+05      376.7         3.11       0.76
        2.01  124.86    .199E+05      476.5         3.38       0.70
        2.24  125.10    .228E+05      586.1         3.64       0.65
        2.48  125.33    .257E+05      705.6         3.88       0.61
        2.71  125.57    .287E+05      835.1         4.12       0.57
        2.95  125.80    .317E+05      974.0         4.35       0.54
        3.19  126.04    .348E+05     1122.3         4.56       0.52
        3.42  126.28    .379E+05     1279.8         4.77       0.49
        3.66  126.51    .411E+05     1446.6         4.97       0.47
        3.89  126.75    .444E+05     1622.6         5.17       0.46
        4.13  126.98    .477E+05     1786.6         5.29       0.45
        4.36  127.22    .513E+05     1942.9         5.36       0.44

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 40370)   17.93     2.57   10.17 201.36      0.15      0.38
  OUTFLOW: ID= 1 ( 60370)   17.93     2.55   10.17 201.36      0.15      0.38


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--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50390):  1608.24 103.787    11.17    99.26
     + ID2= 2 ( 60370):    17.93   2.548    10.17   201.36
       ================================================
       ID = 3 ( 50400):  1626.17 105.687    11.17   100.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        125.01        0.0450
                  20.00        123.70        0.0450
                  25.00        123.04        0.0450
                  30.00        120.84        0.0450
                  35.00        119.81    0.0450 /0.0350  Main Channel
                  40.00        119.74        0.0350      Main Channel
                  65.00        120.12        0.0450
                  90.00        120.58        0.0450
                 100.00        125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.07  119.81    .209E+03        0.1         0.27      34.81
        0.35  120.09    .326E+04        4.7         0.83      11.50
        0.62  120.36    .916E+04       21.3         1.34       7.16
        0.90  120.63    .176E+05       51.5         1.68       5.69
        1.17  120.91    .270E+05       96.6         2.05       4.67
        1.44  121.18    .367E+05      153.8         2.41       3.98
        1.72  121.46    .466E+05      222.1         2.74       3.50
        1.99  121.73    .567E+05      300.7         3.05       3.14
        2.26  122.00    .669E+05      389.1         3.34       2.87
        2.54  122.28    .774E+05      487.1         3.62       2.65
        2.81  122.55    .880E+05      594.2         3.88       2.47
        3.09  122.82    .988E+05      710.4         4.13       2.32
        3.36  123.10    .110E+06      834.4         4.36       2.20
        3.63  123.37    .121E+06      964.4         4.57       2.10
        3.91  123.65    .133E+06     1104.4         4.76       2.01
        4.18  123.92    .145E+06     1250.0         4.93       1.94
        4.45  124.19    .159E+06     1406.7         5.09       1.88
        4.73  124.47    .172E+06     1575.5         5.25       1.82
        5.00  124.74    .187E+06     1756.1         5.39       1.77

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 50400) 1626.17   105.69   11.17 100.38      1.21      2.10
  OUTFLOW: ID= 1 ( 60400) 1626.17   105.54   11.17 100.38      1.21      2.09


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| CALIB            |
| STANDHYD ( 40410)|   Area    (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.35
                   over (min)       5.00        75.00
     Storage Coeff.  (min)=       5.75 (ii)   71.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00        75.00
     Unit Hyd. peak  (cms)=       0.20         0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.29         0.58          0.781 (iii)
     TIME TO PEAK    (hrs)=      10.17        11.33         11.17
     RUNOFF VOLUME    (mm)=     210.34       177.23        185.53
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.83          0.87

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40410):     7.92    0.781    11.17   185.53
     + ID2= 2 ( 60400):  1626.17  105.543    11.17   100.38
       ================================================
       ID = 3 ( 50410):  1634.09  106.324    11.17   100.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                  ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.088 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.806
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.894

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.088    10.17   189.81
      + ID2= 2 (******):     2.44   0.347    10.17   190.26
        ================================================
        ID = 3 (******):     3.06   0.435    10.17   190.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.95   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.158

     PEAK FLOW       (cms)=   0.137 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.142
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.183 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.200
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   6.75   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.37

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.697

     PEAK FLOW       (cms)=   0.924 (i)
     TIME TO PEAK    (hrs)=  10.250
     RUNOFF VOLUME    (mm)= 190.320
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.145 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.102
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.75   0.924    10.25   190.32
      + ID2= 2 (******):     1.01   0.145    10.17   190.10
        ================================================
        ID = 3 (******):     7.76   1.065    10.25   190.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.28

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
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                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.169

     PEAK FLOW       (cms)=   0.176 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.255
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.309 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.222
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.24   0.176    10.17   190.25
      + ID2= 2 (******):     2.16   0.309    10.17   190.22
        ================================================
        ID = 3 (******):     3.40   0.485    10.17   190.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     3.40   0.485    10.17   190.23
      + ID2= 2 (******):     7.76   1.065    10.25   190.29
        ================================================
        ID = 1 (******):    11.16   1.546    10.17   190.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.102 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.990
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.276 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.142
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.078 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.989
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.68   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.30

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
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	0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
	0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
	0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
	0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
	0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
	0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
	1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
	1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
	1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
	1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
	1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
	1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
	1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
	1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
	1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
	1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
	1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
	1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
	3.000	6.35	6.083	13.97	9.167	12.70		
	3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 0.341

PEAK FLOW (cms)= 0.378 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 190.278
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.896

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	1.28	0.183	10.17	190.20
+ ID2= 2 (******):	0.95	0.137	10.17	190.14
ID = 3 (******):	2.23	0.320	10.17	190.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	2.23	0.320	10.17	190.18
+ ID2= 2 (******):	0.71	0.102	10.17	189.99
ID = 1 (******):	2.94	0.423	10.17	190.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	2.94	0.423	10.17	190.13
+ ID2= 2 (******):	1.92	0.276	10.17	190.14
ID = 3 (******):	4.86	0.699	10.17	190.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	4.86	0.699	10.17	190.14
+ ID2= 2 (******):	0.54	0.078	10.17	189.99
ID = 1 (******):	5.40	0.777	10.17	190.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	5.40	0.777	10.17	190.12
+ ID2= 2 (******):	2.68	0.378	10.17	190.28
ID = 3 (******):	8.08	1.155	10.17	190.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	8.08	1.155	10.17	190.17
+ ID2= 2 (******):	3.06	0.435	10.17	190.17
ID = 1 (******):	11.13	1.589	10.17	190.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	11.13	1.589	10.17	190.17
+ ID2= 2 (******):	11.16	1.546	10.17	190.27
ID = 3 (******):	22.30	3.135	10.17	190.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	18.31	Curve Number (CN)=	93.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.48			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 1.457

PEAK FLOW (cms)= 2.361 (i)
TIME TO PEAK (hrs)= 10.417
RUNOFF VOLUME (mm)= 190.341
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.896

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	1.05	Curve Number (CN)=	93.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.23			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 0.174

PEAK FLOW (cms)= 0.151 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 190.142
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.895

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	1.24	Curve Number (CN)=	93.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.24			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 0.197

PEAK FLOW (cms)= 0.178 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 190.174
TOTAL RAINFALL (mm)= 212.340

```
      RUNOFF COEFFICIENT   =   0.896

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.05   0.151    10.17   190.14
      + ID2= 2 (******):    18.31   2.361    10.42   190.34
        ==================================================
        ID = 3 (******):    19.36   2.498    10.33   190.33

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    19.36   2.498    10.33   190.33
      + ID2= 2 (******):     1.24   0.178    10.17   190.17
        ==================================================
        ID = 1 (******):    20.60   2.664    10.33   190.32

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    22.30   3.135    10.17   190.22
      + ID2= 2 (******):    20.60   2.664    10.33   190.32
        ==================================================
        ID = 3 (******):    42.90   5.751    10.25   190.27

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area    (ha)=  21.79
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       6.75         15.03
      Dep. Storage     (mm)=       2.00          7.70
      Average Slope     (%)=       1.90          1.90
      Length            (m)=     671.17        232.57
      Mannings n           =      0.015         0.240

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

Max.Eff.Inten.(mm/hr)=      52.83        56.28
              over (min)       10.00        35.00
Storage Coeff.  (min)=       9.29 (ii)   34.60 (ii)
Unit Hyd. Tpeak (min)=      10.00        35.00
Unit Hyd. peak  (cms)=       0.12         0.03
                                                *TOTALS*
PEAK FLOW       (cms)=       0.80         1.96         2.631 (iii)
TIME TO PEAK    (hrs)=      10.17        10.50        10.25
RUNOFF VOLUME    (mm)=     210.34       184.48       190.95
TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
RUNOFF COEFFICIENT   =       0.99         0.87         0.90

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  91.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):    21.79   2.631    10.25   190.95
      + ID2= 2 (******):    42.90   5.751    10.25   190.27
        ==================================================
        ID = 3 (******):    64.68   8.382    10.25   190.50

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):  1634.09 106.324    11.17   100.80
      + ID2= 2 (******):    64.68   8.382    10.25   190.50
        ==================================================
        ID = 3 ( 50420):  1698.77 113.313    11.17   104.21

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         121.79        0.0450
                 12.00         116.08        0.0450
                 40.00         115.59    0.0450 /0.0350  Main Channel
                 44.00         114.89        0.0350      Main Channel
                 48.00         114.52        0.0350      Main Channel
                 52.00         115.72    0.0350 /0.0450  Main Channel
                 56.00         115.93        0.0450
                 60.00         117.24        0.0450
                 64.00         119.04        0.0450
                 68.00         120.69        0.0450
                 72.00         121.01        0.0450
                 74.00         121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36   114.88    .645E+03        0.7         0.83      14.38
        0.71   115.23    .236E+04        4.6         1.41       8.47
        1.07   115.59    .489E+04       12.6         1.84       6.48
        1.44   115.96    .112E+05       30.9         1.97       6.04
        1.80   116.33    .227E+05       69.1         2.17       5.49
        2.17   116.70    .351E+05      125.6         2.56       4.65
        2.54   117.06    .479E+05      197.5         2.95       4.04
        2.91   117.43    .612E+05      283.9         3.32       3.59
        3.28   117.80    .749E+05      384.1         3.66       3.25
        3.65   118.17    .891E+05      497.4         3.99       2.99
        4.02   118.54    .104E+06      623.5         4.30       2.77
        4.39   118.91    .119E+06      762.2         4.59       2.60
        4.76   119.28    .134E+06      913.1         4.87       2.45
        5.13   119.65    .150E+06     1076.2         5.13       2.32
        5.49   120.02    .166E+06     1251.7         5.38       2.21
        5.86   120.39    .183E+06     1439.5         5.62       2.12
        6.23   120.75    .200E+06     1634.3         5.84       2.04
        6.60   121.12    .219E+06     1831.3         5.99       1.99
        6.97   121.49    .238E+06     2058.5         6.20       1.92

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420) 1698.77   113.31   11.17 104.21      2.09      2.46
   OUTFLOW: ID= 1 ( 60420) 1698.77   113.12   11.25 104.21      2.09      2.46


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--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.41         11.03
      Dep. Storage     (mm)=       2.00          7.80
      Average Slope     (%)=       3.50          3.50
      Length            (m)=     465.00        102.00
      Mannings n           =      0.015         0.320

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

Max.Eff.Inten.(mm/hr)=      52.83        54.59
              over (min)       5.00        25.00
Storage Coeff.  (min)=       6.20 (ii)   21.66 (ii)
Unit Hyd. Tpeak (min)=       5.00        25.00
Unit Hyd. peak  (cms)=       0.19         0.05
                                                *TOTALS*
PEAK FLOW       (cms)=       3.05         1.54         4.568 (iii)
TIME TO PEAK    (hrs)=      10.17        10.25        10.17
RUNOFF VOLUME    (mm)=     210.34       181.39       199.92
TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
RUNOFF COEFFICIENT   =       0.99         0.85         0.94

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   4.568    10.17   199.92
      + ID2= 2 ( 60420):  1698.77 113.121    11.25   104.21
        ==================================================
        ID = 3 ( 50430):  1731.21 116.551    11.17   106.00

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         116.29        0.0450
                 20.00         114.05        0.0450
                 25.00         110.83        0.0450
                 30.00         109.36        0.0450
                 35.00         108.23    0.0450 /0.0350  Main Channel
                 40.00         107.52        0.0350      Main Channel
                 45.00         108.00    0.0350 /0.0450  Main Channel
                 50.00         107.84        0.0450
                 55.00         108.21        0.0450
                 60.00         108.95        0.0450
                 65.00         109.35        0.0450
                 70.00         109.41        0.0450
                 75.00         109.48        0.0450
                 80.00         109.77        0.0450
                 85.00         112.20        0.0450
                 90.00         115.48        0.0450
                100.00         116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
```

	(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
	0.24	107.76	.285E+03	0.4	0.74	12.74
	0.48	108.00	.146E+04	2.6	1.01	9.32
	0.97	108.49	.695E+04	23.3	1.90	4.97
	1.46	108.97	.141E+05	64.5	2.60	3.63
	1.94	109.46	.233E+05	116.9	2.84	3.33
	2.43	109.95	.371E+05	214.6	3.28	2.88
	2.92	110.44	.519E+05	350.2	3.83	2.47
	3.41	110.92	.675E+05	515.9	4.34	2.18
	3.89	111.41	.836E+05	711.3	4.82	1.96
	4.38	111.90	.100E+06	933.4	5.28	1.79
	4.87	112.39	.117E+06	1182.4	5.71	1.65
	5.35	112.87	.135E+06	1458.0	6.13	1.54
	5.84	113.36	.153E+06	1758.3	6.52	1.45
	6.33	113.85	.171E+06	2082.9	6.90	1.37
	6.82	114.34	.190E+06	2410.6	7.19	1.31
	7.30	114.82	.210E+06	2758.9	7.43	1.27
	7.79	115.31	.232E+06	3143.1	7.68	1.23
	8.28	115.80	.255E+06	3473.3	7.71	1.23
	8.77	116.29	.282E+06	3812.4	7.67	1.23

		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
	INFLOW : ID= 2 (50430)	1731.21	116.55	11.17	106.00	1.94	2.84
	OUTFLOW: ID= 1 (60430)	1731.21	116.29	11.17	106.00	1.94	2.84

CALIB	
STANDHYD (40440)	Area (ha)= 57.11
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 65.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	37.70	19.42
Dep. Storage	(mm)=	2.00	6.60
Average Slope	(%)=	2.50	2.50
Length	(m)=	617.06	45.00
Mannings n	=	0.015	0.290

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	52.24
	over (min)	10.00	20.00
Storage Coeff.	(min)=	8.13 (ii)	18.17 (ii)
Unit Hyd. Tpeak	(min)=	10.00	20.00
Unit Hyd. peak	(cms)=	0.13	0.06
PEAK FLOW	(cms)=	5.44	2.67 8.108 (iii)
TIME TO PEAK	(hrs)=	10.17	10.25 10.17
RUNOFF VOLUME	(mm)=	210.34	174.66 197.85
TOTAL RAINFALL	(mm)=	212.34	212.34 212.34
RUNOFF COEFFICIENT	=	0.99	0.82 0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 87.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50440)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (40440):	57.11	8.108	10.17	197.85
+ ID2= 2 (60430):	1731.21	116.294	11.17	106.00
ID = 3 (50440):	1788.32	122.281	11.17	108.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60440)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>		
Distance	Elevation	Manning
0.00	104.01	0.0450
10.00	103.90	0.0450
20.00	103.74	0.0450
30.00	103.66	0.0450
40.00	103.60	0.0450
50.00	102.52	0.0450
60.00	101.16	0.0450
70.00	100.60	0.0450
80.00	100.17	0.0450
90.00	99.85	0.0450
100.00	97.89	0.0350 Main Channel
110.00	97.62	0.0350 Main Channel
120.00	99.12	0.0450
130.00	99.16	0.0450
140.00	99.36	0.0450
150.00	99.66	0.0450
160.00	99.68	0.0450
180.00	99.76	0.0450
190.00	104.10	0.0450

<---------- TRAVEL TIME TABLE ---------->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.27	97.89	.102E+04	1.2	0.77	13.74
0.60	98.21	.381E+04	9.4	1.56	6.74
0.92	98.53	.738E+04	24.3	2.08	5.05
1.24	98.86	.117E+05	46.2	2.50	4.22
1.56	99.18	.171E+05	76.6	2.84	3.71
1.89	99.50	.264E+05	124.5	2.98	3.53
2.21	99.82	.403E+05	189.1	2.96	3.56
2.53	100.15	.597E+05	286.1	3.03	3.48
2.85	100.47	.809E+05	417.7	3.26	3.23
3.17	100.79	.104E+06	580.2	3.53	2.98
3.50	101.11	.128E+06	771.7	3.81	2.77
3.82	101.44	.153E+06	996.3	4.10	2.57
4.14	101.76	.179E+06	1248.4	4.40	2.40
4.46	102.08	.206E+06	1526.4	4.68	2.25
4.79	102.40	.233E+06	1829.8	4.96	2.13
5.11	102.73	.261E+06	2156.4	5.22	2.02
5.43	103.05	.290E+06	2507.0	5.47	1.93
5.75	103.37	.319E+06	2882.7	5.71	1.85
6.08	103.69	.350E+06	3194.7	5.77	1.83

		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
	INFLOW : ID= 2 (50440)	1788.32	122.28	11.17	108.94	1.87	2.98
	OUTFLOW: ID= 1 (60440)	1788.32	121.92	11.25	108.94	1.87	2.98

CALIB	
STANDHYD (40450)	Area (ha)= 30.40
ID= 1 DT= 5.0 min	Total Imp(%)= 44.00 Dir. Conn.(%)= 41.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	13.37	17.02
Dep. Storage	(mm)=	2.00	6.90
Average Slope	(%)=	0.80	0.80
Length	(m)=	450.16	150.00
Mannings n	=	0.015	0.300

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	53.98
	over (min)	10.00	40.00
Storage Coeff.	(min)=	9.47 (ii)	38.79 (ii)
Unit Hyd. Tpeak	(min)=	10.00	40.00
Unit Hyd. peak	(cms)=	0.12	0.03
PEAK FLOW	(cms)=	1.83	2.06 3.649 (iii)
TIME TO PEAK	(hrs)=	10.17	10.67 10.17
RUNOFF VOLUME	(mm)=	210.34	179.76 192.30
TOTAL RAINFALL	(mm)=	212.34	212.34 212.34
RUNOFF COEFFICIENT	=	0.99	0.85 0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50450)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (40450):	30.40	3.649	10.17	192.30
+ ID2= 2 (60440):	1788.32	121.917	11.25	108.94
ID = 3 (50450):	1818.72	125.127	11.17	110.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60450)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>			
Distance	Elevation	Manning	
0.00	97.16	0.0450	
3.00	96.00	0.0450	
6.00	95.32	0.0450	
9.00	94.64	0.0450	
12.00	94.43	0.0450	
15.00	94.29	0.0450	
18.00	94.10	0.0350	Main Channel
21.00	94.02	0.0350	Main Channel
24.00	93.70	0.0350	Main Channel
27.00	94.22	0.0350 /0.0450	Main Channel
30.00	94.90	0.0450	
32.00	95.30	0.0450	
34.00	95.78	0.0450	
36.00	96.25	0.0450	
38.00	96.60	0.0450	
48.00	97.14	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	93.83	.942E+02	0.1	0.39	30.45
0.27	93.96	.377E+03	0.3	0.62	19.18
0.40	94.09	.911E+03	0.9	0.69	17.28
0.59	94.29	.230E+04	3.4	1.06	11.15
0.78	94.48	.428E+04	7.9	1.32	8.98
0.97	94.67	.679E+04	14.6	1.53	7.74
1.16	94.86	.963E+04	23.7	1.75	6.77
1.35	95.05	.127E+05	34.9	1.96	6.07
1.54	95.24	.160E+05	48.1	2.14	5.54
1.73	95.43	.196E+05	63.6	2.31	5.13
1.92	95.62	.233E+05	81.2	2.48	4.79
2.11	95.81	.273E+05	101.0	2.63	4.51
2.30	96.00	.315E+05	123.0	2.78	4.27
2.49	96.19	.360E+05	147.8	2.93	4.06
2.68	96.38	.406E+05	174.6	3.07	3.87
2.87	96.57	.454E+05	203.7	3.20	3.71

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        3.06    96.76    .505E+05     232.7          3.28       3.62
        3.25    96.95    .562E+05     264.9          3.36       3.54
        3.44    97.14    .624E+05     300.8          3.43       3.46

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50450) 1818.72   125.13   11.17 110.33       2.32       2.79
   OUTFLOW: ID= 1 ( 60450) 1818.72   125.00   11.25 110.33       2.32       2.79


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| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       15.36         7.04
     Dep. Storage     (mm)=        2.00         6.68
     Average Slope     (%)=        2.40         2.40
     Length            (m)=      386.43        40.00
     Mannings n           =       0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
             0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
             0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
             0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
             0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
             0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
             0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
             0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
             0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
             0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
             0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
             1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
             1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
             1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
             1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
             1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
             1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
             1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
             1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
             1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
             1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
             1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
             1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
             2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
             2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
             2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
             2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
             2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
             2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
             2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
             2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
             2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
             2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
             2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
             2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
             3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
             3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        77.40
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       6.22 (ii)   14.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.19         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.74         1.48       3.219 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17        10.17
     RUNOFF VOLUME    (mm)=     210.34       183.55       197.70
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.86         0.93

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40    3.219    10.17   197.70
     + ID2= 2 ( 60450):  1818.72  125.003    11.25   110.33
       ================================================
       ID = 3 ( 50460):  1841.12  126.922    11.17   111.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          91.61         0.0450
                  3.00          91.57         0.0450
                  6.00          91.15         0.0450
                  9.00          90.70         0.0450
                 12.00          89.72         0.0450
                 15.00          88.86         0.0450
                 18.00          88.38    0.0450 /0.0350  Main Channel
                 21.00          87.96         0.0350      Main Channel
                 24.00          88.18    0.0350 /0.0450  Main Channel
                 26.00          88.19         0.0450
                 28.00          88.30         0.0450
                 30.00          90.32         0.0450
                 32.00          90.49         0.0450
                 34.00          90.80         0.0450
                 36.00          90.85         0.0450
                 38.00          90.97         0.0450
                 40.00          91.15         0.0450
                 42.00          91.29         0.0450
                 44.00          91.40         0.0450
                 46.00          91.56         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   88.07    .589E+02        0.0         0.34      23.89
        0.21   88.18    .235E+03        0.3         0.54      15.05
        0.41   88.38    .106E+04        1.8         0.85       9.64
        0.61   88.57    .211E+04        5.3         1.22       6.69
        0.81   88.77    .330E+04       10.2         1.51       5.40
        1.01   88.97    .462E+04       16.6         1.76       4.63
        1.21   89.17    .603E+04       24.5         1.99       4.10
        1.41   89.37    .753E+04       33.8         2.19       3.72
        1.61   89.57    .912E+04       44.4         2.38       3.42
        1.81   89.77    .108E+05       56.4         2.56       3.19
        2.00   89.97    .125E+05       69.9         2.72       2.99
        2.20   90.17    .144E+05       84.7         2.88       2.83
        2.40   90.37    .163E+05       99.8         3.00       2.72
        2.60   90.56    .184E+05      114.7         3.04       2.68
        2.80   90.76    .208E+05      132.8         3.13       2.61
        3.00   90.96    .235E+05      148.4         3.09       2.64
        3.20   91.16    .266E+05      170.7         3.13       2.60
        3.40   91.36    .302E+05      194.9         3.16       2.58
        3.60   91.56    .342E+05      223.5         3.20       2.55

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50460) 1841.12   126.92   11.17 111.39       2.74       3.10
   OUTFLOW: ID= 1 ( 60460) 1841.12   126.90   11.25 111.39       2.74       3.10


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       59.53        30.66
     Dep. Storage     (mm)=        2.00         5.90
     Average Slope     (%)=        1.40         1.40
     Length            (m)=      775.42        40.00
     Mannings n           =       0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
             0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
             0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
             0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
             0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
             0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
             0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
             0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
             0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
             0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
             0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
             1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
             1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
             1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
             1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
             1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
             1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
             1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
             1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
             1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
             1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
             1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
             1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
             2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
             2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
             2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
             2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
             2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
             2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
             2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
             2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
             2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
             2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
             2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
             2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
             3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
             3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        70.01
                   over (min)      10.00        25.00
     Storage Coeff.  (min)=      11.10 (ii)   20.80 (ii)
     Unit Hyd. Tpeak (min)=      10.00        25.00
     Unit Hyd. peak  (cms)=       0.10         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       7.11         5.52       12.580 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25        10.17
     RUNOFF VOLUME    (mm)=     210.34       185.18       198.77
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.87         0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  88.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40470):    90.19   12.580    10.17   198.77
     + ID2= 2 ( 60460):  1841.12  126.896    11.25   111.39
       ================================================
       ID = 3 ( 50470):  1931.31  136.103    11.17   115.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          89.19         0.0450
                  2.00          88.89         0.0450
                  4.00          88.54         0.0450
                  6.00          88.31         0.0450
                  8.00          88.14         0.0450
                 10.00          88.02         0.0450
                 12.00          87.99         0.0450
                 14.00          87.90         0.0450
                 16.00          87.84         0.0450
                 19.00          87.55         0.0450
                 22.00          86.85         0.0450
                 25.00          86.23         0.0350      Main Channel
                 28.00          86.23         0.0350      Main Channel
                 31.00          86.60         0.0450
                 34.00          87.49         0.0450
                 37.00          88.15         0.0450
                 41.00          88.21         0.0450
                 45.00          88.29         0.0450
                 48.00          88.36         0.0450
                 50.00          89.13         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50470) 1931.31   136.10   11.17 115.47       2.74       1.98
   OUTFLOW: ID= 1 ( 60470) 1931.31   135.56   11.25 115.47       2.75       1.99
```

```
06427>
06428> ------------------------------------------------------------------------------
06429> --------------------
06430> | CALIB            |
06431> | STANDHYD ( 40480)|   Area    (ha)=  56.43
06432> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
06433> --------------------
06434>                             IMPERVIOUS    PERVIOUS (i)
06435>      Surface Area     (ha)=      42.82         13.61
06436>      Dep. Storage     (mm)=       2.00          5.80
06437>      Average Slope     (%)=       1.90          1.90
06438>      Length            (m)=     613.35         40.00
06439>      Mannings n             =     0.015         0.260
06440>
06441>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
06442>
06443>
06444>                                ---- TRANSFORMED HYETOGRAPH ----
06445>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
06446>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
06447>                0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
06448>                0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
06449>                0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
06450>                0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
06451>                0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
06452>                0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
06453>                0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
06454>                0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
06455>                0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
06456>                0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
06457>                0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
06458>                1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
06459>                1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
06460>                1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
06461>                1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
06462>                1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
06463>                1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
06464>                1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
06465>                1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
06466>                1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
06467>                1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
06468>                1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
06469>                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
06470>                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
06471>                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
06472>                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
06473>                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
06474>                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
06475>                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
06476>                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
06477>                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
06478>                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
06479>                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
06480>                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
06481>                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
06482>                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
06483>                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
06484>
06485>      Max.Eff.Inten.(mm/hr)=      52.83        88.99
06486>                    over (min)       10.00        20.00
06487>      Storage Coeff.  (min)=       8.80 (ii)   16.49 (ii)
06488>      Unit Hyd. Tpeak (min)=      10.00        20.00
06489>      Unit Hyd. peak  (cms)=       0.12         0.06
06490>                                                    *TOTALS*
06491>      PEAK FLOW       (cms)=       4.88         3.24          8.116 (iii)
06492>      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
06493>      RUNOFF VOLUME    (mm)=     210.34       193.56         203.46
06494>      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
06495>      RUNOFF COEFFICIENT   =       0.99         0.91           0.96
06496>
06497>
06498>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06499>             CN*  =  90.0    Ia = Dep. Storage  (Above)
06500>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06501>            THAN THE STORAGE COEFFICIENT.
06502>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06503>
06504> ------------------------------------------------------------------------------
06505>
06506> --------------------
06507> | ADD HYD  ( 50480)|
06508> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
06509> --------------------           (ha)    (cms)    (hrs)     (mm)
06510>         ID1= 1 ( 40480):    56.43   8.116    10.17   203.46
06511>       + ID2= 2 ( 60470):  1931.31 135.556    11.25   115.47
06512>         ========================================================
06513>         ID = 3 ( 50480):  1987.74 141.015    11.25   117.97
06514>
06515>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06516> ------------------------------------------------------------------------------
06517> --------------------
06518> | ROUTE CHN( 60480)|
06519> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
06520> --------------------
06521>                <------ DATA FOR SECTION (   1.1) ------>
06522>                Distance      Elevation       Manning
06523>                    0.00         86.90        0.0450
06524>                    2.00         86.76        0.0450
06525>                    4.00         85.96        0.0450
06526>                    6.00         85.44        0.0450
06527>                    8.00         84.83        0.0450
06528>                   10.00         84.50        0.0450
06529>                   12.00         84.15        0.0450
06530>                   14.00         83.85        0.0350      Main Channel
06531>                   16.00         83.86        0.0350      Main Channel
06532>                   18.00         83.99    0.0350 /0.0450  Main Channel
06533>                   20.00         84.27        0.0450
06534>                   22.00         84.55        0.0450
06535>                   24.00         84.88        0.0450
06536>                   26.00         85.37        0.0450
06537>                   27.00         85.68        0.0450
06538>                   28.00         85.91        0.0450
06539>                   29.00         86.08        0.0450
06540>                   30.00         86.21        0.0450
06541>                   31.00         86.29        0.0450
06542>                   34.00         86.87        0.0450
06543>
06544>       <---------------------- TRAVEL TIME TABLE ----------------------->
06545>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
06546>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
06547>         0.16   84.01    .165E+03        0.3         0.48      10.34
06548>         0.32   84.17    .460E+03        1.2         0.77       6.41
06549>         0.48   84.33    .855E+03        2.8         0.98       5.07
06550>         0.64   84.48    .135E+04        5.2         1.14       4.35
06551>         0.80   84.64    .193E+04        8.3         1.28       3.88
06552>         0.95   84.80    .261E+04       12.3         1.40       3.53
06553>         1.11   84.96    .337E+04       17.4         1.53       3.23
06554>         1.27   85.12    .419E+04       23.5         1.66       2.97
06555>         1.43   85.28    .506E+04       30.5         1.79       2.77
06556>         1.59   85.44    .599E+04       38.5         1.90       2.60
06557>         1.75   85.60    .697E+04       47.3         2.01       2.46
06558>         1.91   85.76    .801E+04       57.1         2.12       2.34
06559>         2.07   85.92    .911E+04       67.8         2.21       2.24
06560>         2.23   86.07    .103E+05       79.5         2.30       2.15
06561>         2.39   86.23    .115E+05       91.9         2.37       2.09
06562>         2.54   86.39    .128E+05      105.7         2.45       2.02
06563>         2.70   86.55    .142E+05      121.2         2.53       1.95
06564>         2.86   86.71    .156E+05      138.0         2.62       1.89
06565>         3.02   86.87    .171E+05      153.0         2.65       1.87
06566>
06567>                                    <---- hydrograph ---->   <-pipe / channel->
06568>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
06569>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
06570>    INFLOW : ID= 2 ( 50480) 1987.74   141.01   11.25 117.97       2.89      2.63
06571>    OUTFLOW: ID= 1 ( 60480) 1987.74   141.02   11.25 117.97       2.89      2.62
06572>
06573>
06574>
06575> ------------------------------------------------------------------------------
06576> --------------------
06577> | CALIB            |
06578> | STANDHYD ( 40490)|   Area    (ha)=  16.76
06579> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
06580> --------------------
06581>                             IMPERVIOUS    PERVIOUS (i)
06582>      Surface Area     (ha)=      12.60         4.16
06583>      Dep. Storage     (mm)=       2.00         6.22
06584>      Average Slope     (%)=       1.40         1.40
06585>      Length            (m)=     334.28        53.00
06586>      Mannings n             =     0.015        0.270
06587>
06588>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
06589>
06590>
06591>                                ---- TRANSFORMED HYETOGRAPH ----
06592>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
06593>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
06594>                0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
06595>                0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
06596>                0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
06597>                0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
06598>                0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
06599>                0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
06600>                0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
06601>                0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
06602>                0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
06603>                0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
06604>                0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
06605>                1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
06606>                1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
06607>                1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
06608>                1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
06609>                1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
06610>                1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
06611>                1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
06612>                1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
06613>                1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
06614>                1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
06615>                1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
06616>                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
06617>                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
06618>                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
06619>                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
06620>                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
06621>                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
06622>                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
06623>                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
06624>                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
06625>                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
06626>                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
06627>                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
06628>                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
06629>                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
06630>                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
06631>
06632>      Max.Eff.Inten.(mm/hr)=      52.83        83.32
06633>                    over (min)       5.00        20.00
06634>      Storage Coeff.  (min)=       6.70 (ii)   17.18 (ii)
06635>      Unit Hyd. Tpeak (min)=       5.00        20.00
06636>      Unit Hyd. peak  (cms)=       0.18         0.06
06637>                                                    *TOTALS*
06638>      PEAK FLOW       (cms)=       1.49         0.92          2.408 (iii)
06639>      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
06640>      RUNOFF VOLUME    (mm)=     210.34       192.13         203.13
06641>      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
06642>      RUNOFF COEFFICIENT   =       0.99         0.90           0.96
06643>
06644>
06645>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06646>             CN*  =  90.0    Ia = Dep. Storage  (Above)
06647>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06648>            THAN THE STORAGE COEFFICIENT.
06649>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06650>
06651> ------------------------------------------------------------------------------
06652>
06653> --------------------
06654> | ADD HYD  ( 50490)|
06655> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
06656> --------------------           (ha)    (cms)    (hrs)     (mm)
06657>         ID1= 1 ( 40490):    16.76   2.408    10.17   203.13
06658>       + ID2= 2 ( 60480):  1987.74 141.022    11.25   117.97
06659>         ========================================================
06660>         ID = 3 ( 50490):  2004.50 142.395    11.25   118.68
06661>
06662>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06663> ------------------------------------------------------------------------------
06664> --------------------
06665> | ROUTE CHN( 60490)|
06666> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
06667> --------------------
06668>                <------ DATA FOR SECTION (   1.1) ------>
06669>                Distance      Elevation       Manning
06670>                    0.00         85.84        0.0450
06671>                    6.00         84.32        0.0450
06672>                   12.00         84.21        0.0450
06673>                   18.00         84.12        0.0450
06674>                   24.00         84.08        0.0450
06675>                   30.00         84.10        0.0450
06676>                   36.00         84.03        0.0450
06677>                   42.00         83.92        0.0450
06678>                   48.00         83.88        0.0450
06679>                   54.00         82.88        0.0350      Main Channel
06680>                   60.00         83.12    0.0350 /0.0450  Main Channel
06681>                   64.00         83.65        0.0450
06682>                   68.00         83.60        0.0450
06683>                   72.00         83.67        0.0450
06684>                   76.00         83.70        0.0450
06685>                   80.00         83.82        0.0450
06686>                   84.00         83.90        0.0450
06687>                   88.00         84.05        0.0450
06688>                   92.00         84.16        0.0450
06689>                  100.00         85.83        0.0450
06690>
06691>       <---------------------- TRAVEL TIME TABLE ----------------------->
06692>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
06693>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
06694>         0.16   83.04    .332E+03        0.1         0.32      46.08
06695>         0.31   83.19    .129E+04        0.8         0.57      26.14
06696>         0.47   83.35    .259E+04        2.3         0.79      18.75
06697>         0.62   83.50    .418E+04        4.5         0.96      15.43
06698>         0.78   83.66    .626E+04        7.3         1.04      14.28
06699>         0.93   83.81    .101E+05       11.9         1.05      14.10
06700>         1.09   83.97    .153E+05       17.6         1.02      14.55
06701>         1.24   84.13    .231E+05       26.2         1.00      14.73
06702>         1.40   84.28    .341E+05       41.2         1.07      13.79
06703>         1.55   84.44    .460E+05       61.7         1.19      12.44
06704>         1.71   84.59    .582E+05       86.6         1.32      11.21
06705>         1.86   84.75    .706E+05      115.2         1.45      10.21
06706>         2.02   84.90    .831E+05      147.5         1.57       9.39
06707>         2.17   85.06    .959E+05      183.2         1.70       8.72
06708>         2.33   85.21    .109E+06      222.2         1.81       8.16
06709>         2.48   85.37    .122E+06      264.5         1.93       7.68
06710>         2.64   85.52    .135E+06      310.0         2.03       7.27
06711>         2.79   85.68    .149E+06      358.5         2.14       6.91
06712>         2.95   85.83    .162E+06      410.1         2.24       6.60
06713>
06714>                                    <---- hydrograph ---->   <-pipe / channel->
06715>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
06716>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
06717>    INFLOW : ID= 2 ( 50490) 2004.50   142.40   11.25 118.68       1.99      1.55
06718>    OUTFLOW: ID= 1 ( 60490) 2004.50   141.34   11.33 118.68       1.99      1.55
06719>
06720>
06721>
06722> ------------------------------------------------------------------------------
06723> --------------------
06724> | CALIB            |
06725> | STANDHYD ( 40810)|   Area    (ha)=  20.64
06726> |ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
06727> --------------------
06728>                             IMPERVIOUS    PERVIOUS (i)
06729>      Surface Area     (ha)=      15.92         4.72
06730>      Dep. Storage     (mm)=       2.00         5.43
06731>      Average Slope     (%)=       2.10         2.10
06732>      Length            (m)=     370.92        40.00
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      Mannings n          =      0.015        0.260

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Max.Eff.Inten.(mm/hr)=      52.83        88.71
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       6.32 (ii)   13.79 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.19         0.08
                                                    *TOTALS*
      PEAK FLOW       (cms)=       1.85         1.14          2.997 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
      RUNOFF VOLUME    (mm)=     210.34       193.72         203.89
      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
      RUNOFF COEFFICIENT   =       0.99         0.91           0.96

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40810):    20.64    2.997    10.17   203.89
      + ID2= 2 ( 60490):  2004.50  141.344    11.33   118.68
        ================================================
        ID = 3 ( 50810):  2025.14  142.720    11.25   119.55

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| STANDHYD ( 40500)|   Area     (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area      (ha)=       2.52         6.81
      Dep. Storage      (mm)=       2.00         9.76
      Average Slope      (%)=       3.20         3.20
      Length             (m)=     249.31        47.00
      Mannings n            =      0.015        0.350

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Max.Eff.Inten.(mm/hr)=      52.83        57.92
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       4.39 (ii)   14.66 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.23         0.08
                                                    *TOTALS*
      PEAK FLOW       (cms)=       0.24         1.07          1.308 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
      RUNOFF VOLUME    (mm)=     210.34       177.07         182.88
      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
      RUNOFF COEFFICIENT   =       0.99         0.83           0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  88.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40500):     9.32    1.308    10.17   182.88
      + ID2= 2 ( 50810):  2025.14  142.720    11.25   119.55
        ================================================
        ID = 3 ( 50500):  2034.46  143.572    11.25   119.84

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Unit Hyd Qpeak  (cms)=   0.146

      PEAK FLOW       (cms)=   0.100 (i)
      TIME TO PEAK    (hrs)=  10.167
      RUNOFF VOLUME    (mm)= 189.806
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.894

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Unit Hyd Qpeak  (cms)=   0.161

      PEAK FLOW       (cms)=   0.140 (i)
      TIME TO PEAK    (hrs)=  10.167
      RUNOFF VOLUME    (mm)= 190.142
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.895

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.100    10.17   189.81
      + ID2= 2 (******):     0.97   0.140    10.17   190.14
        ================================================
        ID = 3 (******):     1.66   0.239    10.17   190.00

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number   (CN)= 93.0
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|ID= 1 DT= 5.0 min | Ia (mm)= 4.48 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.16

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 0.053

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 189.492
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.892

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| NASHYD (******)| Area (ha)= 14.62 Curve Number (CN)= 93.0
|ID= 1 DT= 5.0 min | Ia (mm)= 4.48 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.45

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 1.241

PEAK FLOW (cms)= 1.917 (i)
TIME TO PEAK (hrs)= 10.333
RUNOFF VOLUME (mm)= 190.337
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.896

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| NASHYD (******)| Area (ha)= 0.93 Curve Number (CN)= 93.0
|ID= 1 DT= 5.0 min | Ia (mm)= 4.48 # of Linear Res.(N)= 3.00
---------- U.H. Tp(hrs)= 0.23

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 0.154

PEAK FLOW (cms)= 0.134 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 190.142
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.895

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (******)| Area (ha)= 26.50
|ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 30.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	13.25	13.25
Dep. Storage (mm)=	2.00	4.48
Average Slope (%)=	2.00	2.00
Length (m)=	420.00	30.00
Mannings n =	0.013	0.025

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.(mm/hr)=	52.83	73.47	
over (min)	5.00	10.00	
Storage Coeff. (min)=	6.34 (ii)	8.70 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.12	
PEAK FLOW (cms)=	1.17	2.70	3.866 (iii)
TIME TO PEAK (hrs)=	10.17	10.17	10.17
RUNOFF VOLUME (mm)=	210.34	196.32	200.53
TOTAL RAINFALL (mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT =	0.99	0.92	0.94

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 93.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(******)| OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT= 5.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE
---------- (cms) (ha.m.) | (cms) (ha.m.)

0.0000	0.0000	1.8600	0.9862
0.0560	0.3250	2.1000	1.0580
0.2600	0.4718	2.2000	1.2000
0.7400	0.6512	10.0000	1.2500
1.4100	0.8427	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (******)	26.500	3.866	10.17	200.53
OUTFLOW: ID= 1 (******)	26.500	4.509	10.08	200.47
OVERFLOW:ID= 3 (0003)	0.000	0.000	0.00	0.00

TOTAL NUMBER OF SIMULATION OVERFLOW = 0
CUMULATIVE TIME OF OVERFLOW (HOURS) = 0.00
PERCENTAGE OF TIME OVERFLOWING (%) = 0.00

PEAK FLOW REDUCTION [Qout/Qin](%)=116.64
TIME SHIFT OF PEAK FLOW (min)= -5.00
MAXIMUM STORAGE USED (ha.m.)= 1.2129

**** WARNING : HYDROGRAPH PEAK WAS NOT REDUCED.
CHECK OUTFLOW/STORAGE TABLE OR REDUCE DT.

| Junction Command(306510042) |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 3(30651001)	0.00	0.00	0.00	0.00
OUTFLOW: ID= 2(306510042)	0.00	0.00	0.00	0.00

| ADD HYD (******)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
---------- (ha) (cms) (hrs) (mm)
*** W A R N I N G : HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G : HYDROGRAPH 0003 = HYDROGRAPH 0001

ID1= 1 (******):	26.50	4.509	10.08	200.47
+ ID2= 2 (******):	0.00	0.000	0.00	0.00
ID = 3 (******):	26.50	4.509	10.08	200.47

```
07345>
07346>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07347> ------------------------------------------------------------------------------
07348> --------------------
07349> | CALIB            |
07350> | STANDHYD (******)|   Area    (ha)=   3.93
07351> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
07352> --------------------
07353>                              IMPERVIOUS    PERVIOUS (i)
07354>      Surface Area     (ha)=       3.89         0.04
07355>      Dep. Storage     (mm)=       2.00         4.48
07356>      Average Slope     (%)=       0.40         1.00
07357>      Length            (m)=     115.50         0.00
07358>      Mannings n             =     0.013        0.030
07359>
07360>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
07361>
07362>
07363>                          ---- TRANSFORMED HYETOGRAPH ----
07364>                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
07365>                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
07366>               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
07367>               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
07368>               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
07369>               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
07370>               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
07371>               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
07372>               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
07373>               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
07374>               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
07375>               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
07376>               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
07377>               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
07378>               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
07379>               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
07380>               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
07381>               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
07382>               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
07383>               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
07384>               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
07385>               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
07386>               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
07387>               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
07388>               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
07389>               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
07390>               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
07391>               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
07392>               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
07393>               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
07394>               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
07395>               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
07396>               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
07397>               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
07398>               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
07399>               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
07400>               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
07401>               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
07402>               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
07403>
07404>      Max.Eff.Inten.(mm/hr)=      52.83        52.18
07405>                  over (min)        5.00         5.00
07406>      Storage Coeff.  (min)=       4.73 (ii)    4.73 (ii)
07407>      Unit Hyd. Tpeak (min)=       5.00         5.00
07408>      Unit Hyd. peak  (cms)=       0.22         0.22
07409>                                                      *TOTALS*
07410>      PEAK FLOW       (cms)=       0.57         0.01          0.577 (iii)
07411>      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
07412>      RUNOFF VOLUME    (mm)=     210.34       190.35         210.14
07413>      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
07414>      RUNOFF COEFFICIENT   =       0.99         0.90           0.99
07415>
07416> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
07417>
07418>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
07419>            CN*  =  93.0    Ia = Dep. Storage  (Above)
07420>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
07421>            THAN THE STORAGE COEFFICIENT.
07422>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07423>
07424> ------------------------------------------------------------------------------
07425> --------------------
07426> | CALIB            |
07427> | STANDHYD (******)|   Area    (ha)=   0.45
07428> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
07429> --------------------
07430>                              IMPERVIOUS    PERVIOUS (i)
07431>      Surface Area     (ha)=       0.45         0.00
07432>      Dep. Storage     (mm)=       2.00         4.48
07433>      Average Slope     (%)=       0.40         1.00
07434>      Length            (m)=      48.30         0.00
07435>      Mannings n             =     0.013        0.030
07436>
07437>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
07438>
07439>
07440>                          ---- TRANSFORMED HYETOGRAPH ----
07441>                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
07442>                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
07443>               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
07444>               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
07445>               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
07446>               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
07447>               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
07448>               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
07449>               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
07450>               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
07451>               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
07452>               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
07453>               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
07454>               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
07455>               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
07456>               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
07457>               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
07458>               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
07459>               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
07460>               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
07461>               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
07462>               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
07463>               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
07464>               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
07465>               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
07466>               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
07467>               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
07468>               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
07469>               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
07470>               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
07471>               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
07472>               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
07473>               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
07474>               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
07475>               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
07476>               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
07477>               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
07478>               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
07479>               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
07480>
07481>      Max.Eff.Inten.(mm/hr)=      52.83        52.18
07482>                  over (min)        5.00         5.00
07483>      Storage Coeff.  (min)=       2.81 (ii)    2.81 (ii)
07484>      Unit Hyd. Tpeak (min)=       5.00         5.00
07485>      Unit Hyd. peak  (cms)=       0.28         0.28
07486>                                                      *TOTALS*
07487>      PEAK FLOW       (cms)=       0.07         0.00          0.066 (iii)
07488>      TIME TO PEAK    (hrs)=      10.00        10.17          10.17
07489>      RUNOFF VOLUME    (mm)=     210.34       190.35         210.13
07490>      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
07491>      RUNOFF COEFFICIENT   =       0.99         0.90           0.99
07492>
07493> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
07494>
07495>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
07496>            CN*  =  93.0    Ia = Dep. Storage  (Above)
07497>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
07498>            THAN THE STORAGE COEFFICIENT.
07499>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07500>
07501> ------------------------------------------------------------------------------
07502>
07503> --------------------
07504> | ADD HYD  (******)|
07505> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
07506> --------------------          (ha)    (cms)    (hrs)     (mm)
07507>         ID1= 1 (******):     0.93   0.134    10.17   190.14
07508>       + ID2= 2 (******):     3.93   0.577    10.17   210.14
07509>         ================================================
07510>         ID = 3 (******):     4.86   0.710    10.17   206.31
07511>
07512>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07513> ------------------------------------------------------------------------------
07514>
07515> --------------------
07516> | ADD HYD  (******)|
07517> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
07518> --------------------          (ha)    (cms)    (hrs)     (mm)
07519>         ID1= 3 (******):     4.86   0.710    10.17   206.31
07520>       + ID2= 2 (******):     0.45   0.066    10.17   210.13
07521>         ================================================
07522>         ID = 1 (******):     5.31   0.776    10.17   206.64
07523>
07524>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07525> ------------------------------------------------------------------------------
07526>
07527> --------------------
07528> | ADD HYD  (******)|
07529> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
07530> --------------------          (ha)    (cms)    (hrs)     (mm)
07531>         ID1= 1 (******):     5.31   0.776    10.17   206.64
07532>       + ID2= 2 (******):    26.50   4.509    10.08   200.47
07533>         ================================================
07534>         ID = 3 (******):    31.81   5.285    10.08   201.50
07535>
07536>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07537> ------------------------------------------------------------------------------
07538>
07539> --------------------
07540> | ADD HYD  (******)|
07541> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
07542> --------------------          (ha)    (cms)    (hrs)     (mm)
07543>         ID1= 1 (******):    14.62   1.917    10.33   190.34
07544>       + ID2= 2 (******):    31.81   5.285    10.08   201.50
07545>         ================================================
07546>         ID = 3 (******):    46.43   7.069    10.08   197.99
07547>
07548>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07549> ------------------------------------------------------------------------------
07550> --------------------
07551> | ROUTE CHN(******)|
07552> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
07553> --------------------
07554>                <------ DATA FOR SECTION (   1.1) ------>
07555>                Distance      Elevation       Manning
07556>                   0.00         443.75        0.0450
07557>                   8.50         443.74        0.0450
07558>                  35.47         443.64        0.0450
07559>                  64.60         443.29        0.0450
07560>                  74.71         443.18        0.0450
07561>                  80.25         443.17        0.0450
07562>                 112.17         443.12    0.0450 /0.0350  Main Channel
07563>                 131.57         442.76        0.0350      Main Channel
07564>                 137.50         442.66        0.0350      Main Channel
07565>                 137.91         442.67        0.0350      Main Channel
07566>                 152.28         442.24        0.0350      Main Channel
07567>                 167.40         441.39        0.0350      Main Channel
07568>                 178.29         441.56        0.0350      Main Channel
07569>                 216.75         442.01        0.0350      Main Channel
07570>                 221.54         442.05    0.0350 /0.0450  Main Channel
07571>                 334.66         442.50        0.0450
07572>
07573>       <--------------------- TRAVEL TIME TABLE ---------------------->
07574>        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
07575>          (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
07576>         0.05   441.45    .114E+03       0.0          0.27       55.89
07577>         0.11   441.50    .457E+03       0.2          0.43       35.21
07578>         0.16   441.56    .103E+04       0.6          0.57       26.87
07579>         0.22   441.61    .185E+04       1.4          0.67       22.84
07580>         0.27   441.67    .297E+04       2.5          0.77       19.84
07581>         0.33   441.72    .437E+04       4.1          0.87       17.59
07582>         0.38   441.78    .605E+04       6.4          0.96       15.85
07583>         0.44   441.83    .802E+04       9.2          1.05       14.47
07584>         0.49   441.89    .103E+05      12.8          1.14       13.35
07585>         0.55   441.94    .128E+05      17.2          1.23       12.42
07586>         0.60   442.00    .157E+05      22.4          1.31       11.63
07587>         0.66   442.05    .188E+05      28.3          1.38       11.07
07588>         0.71   442.11    .225E+05      36.9          1.50       10.16
07589>         0.78   442.17    .277E+05      48.4          1.60        9.54
07590>         0.84   442.24    .339E+05      61.9          1.67        9.13
07591>         0.91   442.30    .412E+05      77.1          1.71        8.90
07592>         0.97   442.36    .495E+05      94.7          1.75        8.71
07593>         1.03   442.43    .589E+05     114.9          1.79        8.54
07594>         1.10   442.49    .693E+05     137.9          1.82        8.38
07595>
07596>                                    <---- hydrograph ---->   <-pipe / channel->
07597>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
07598>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
07599>    INFLOW : ID= 2 (******)   46.43     7.07   10.08 197.99      0.40      0.98
07600>    OUTFLOW: ID= 1 (******)   46.43     5.71   10.33 197.98      0.37      0.93
07601>
07602>
07603>
07604> ------------------------------------------------------------------------------
07605> --------------------
07606> | DIVERTHYD(******)|
07607> | IN= 1   # OUT= 5 |
07608> --------------------
07609>      Outflow / Inflow  Relationships
07610>
07611>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
07612>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
07613>         0.00     0.00     0.00     0.00     0.00     0.00
07614>         0.92     0.00     0.00     0.00     0.00     0.92
07615>         1.00     0.73     0.00     0.00     0.00     1.73
07616>         1.00     1.11     0.00     0.00     0.00     2.11
07617>         1.00     1.60     0.00     0.00     0.00     2.60
07618>         1.00     2.08     0.00     0.00     0.00     3.08
07619>         1.00     2.63     0.00     0.00     0.00     3.63
07620>         1.00     4.53     0.00     0.00     0.00     5.53
07621>                      OUTFLOW TABLES EXCEEDED
07622>
07623>                               AREA     QPEAK     TPEAK     R.V.
07624>                               (ha)     (cms)     (hrs)     (mm)
07625>      TOTAL HYD.(ID= 1):     46.43      5.71     10.33   197.98
07626>      ================================================
07627>      ID= 2  (   2)    :     20.89      1.03     10.33   197.98
07628>      ID= 3  (   2)    :     25.54      4.68     10.33   197.98
07629>      ID= 4  (   2)    :      0.00      0.00      0.00     0.00
07630>      ID= 5  (   2)    :      0.00      0.00      0.00     0.00
07631>      ID= 6  (   2)    :      0.00      0.00      0.00     0.00
07632> ------------------------------------------------------------------------------
07633>
07634> --------------------
07635> | ADD HYD  (******)|
07636> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
07637> --------------------          (ha)    (cms)    (hrs)     (mm)
07638>         ID1= 1 (******):     0.22   0.032    10.17   189.49
07639>       + ID2= 2 (******):    25.54   4.680    10.33   197.98
07640>         ================================================
07641>         ID = 3 (******):    25.76   4.707    10.33   197.91
07642>
07643>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07644> ------------------------------------------------------------------------------
07645> --------------------
07646> | ROUTE CHN(******)|
07647> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
07648> --------------------
07649>                <------ DATA FOR SECTION (   1.1) ------>
07650>                Distance      Elevation       Manning
```

```
                  0.00        433.07        0.0450
                 59.66        432.39        0.0450
                 94.25        432.03        0.0450
                115.71        431.82        0.0450
                143.84        431.84    0.0450 /0.0350  Main Channel
                163.59        431.75        0.0350      Main Channel
                177.84        431.73        0.0350      Main Channel
                199.51        431.70        0.0350      Main Channel
                231.74        431.53        0.0350      Main Channel
                283.71        431.44        0.0350      Main Channel
                294.09        431.43        0.0350      Main Channel
                325.65        431.42        0.0350      Main Channel
                355.24        431.24        0.0350      Main Channel
                383.70        431.43        0.0350      Main Channel
                476.17        432.06    0.0350 /0.0450  Main Channel
                510.88        432.23        0.0450
                558.61        432.37        0.0450
                589.84        432.57        0.0450
                622.97        432.73        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.08   431.32    .108E+03        0.3         0.30       6.68
       0.15   431.39    .434E+03        1.7         0.47       4.21
       0.23   431.47    .119E+04        5.0         0.50       3.99
       0.30   431.54    .252E+04       13.9         0.66       3.02
       0.38   431.62    .417E+04       29.3         0.84       2.37
       0.45   431.69    .604E+04       50.1         0.99       2.01
       0.53   431.77    .828E+04       73.9         1.06       1.87
       0.60   431.84    .109E+05      108.8         1.19       1.67
       0.68   431.92    .142E+05      159.5         1.34       1.48
       0.76   432.01    .176E+05      219.4         1.48       1.34
       0.84   432.09    .213E+05      290.0         1.62       1.22
       0.92   432.17    .252E+05      374.6         1.77       1.12
       1.01   432.25    .293E+05      469.2         1.91       1.04
       1.09   432.33    .338E+05      573.9         2.02       0.98
       1.17   432.41    .386E+05      689.9         2.13       0.93
       1.25   432.49    .435E+05      817.2         2.24       0.89
       1.33   432.57    .487E+05      955.3         2.34       0.85
       1.41   432.65    .541E+05     1103.5         2.43       0.82
       1.49   432.73    .597E+05     1262.7         2.52       0.79

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 (******)     25.76     4.71   10.33 197.91      0.22      0.50
OUTFLOW: ID= 1 (******)     25.76     4.66   10.42 197.91      0.22      0.50


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083     0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167     0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250     6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333     6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417     6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500     6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583     6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667     6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750     6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833     6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917     6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000     6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083     6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167     6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250     4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333     4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417     4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500     4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583     4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667     4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750     4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833     4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917     4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000     4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083     4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167     4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250     6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333     6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417     6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500     6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583     6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667     6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750     6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833     6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917     6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000     6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083     6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.065 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.493
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.892

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083     0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167     0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250     6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333     6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417     6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500     6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583     6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667     6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750     6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833     6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917     6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000     6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083     6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167     6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250     4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333     4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417     4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500     4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583     4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667     4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750     4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833     4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917     4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000     4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083     4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167     4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250     6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333     6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417     6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500     6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583     6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667     6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750     6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833     6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917     6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000     6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083     6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.539 (i)
     TIME TO PEAK    (hrs)=  10.250
     RUNOFF VOLUME    (mm)= 190.301
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87    0.539    10.25   190.30
      + ID2= 2 (******):     0.45    0.065    10.17   189.49
        ================================================
        ID = 3 (******):     4.32    0.603    10.17   190.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32    0.603    10.17   190.22
      + ID2= 2 (******):    25.76    4.664    10.42   197.91
        ================================================
        ID = 1 (******):    30.08    5.228    10.42   196.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         430.79        0.0450
                  23.82         429.79    0.0450 /0.0350  Main Channel
                  44.05         429.11        0.0350      Main Channel
                  70.46         428.15        0.0350      Main Channel
                 112.31         427.60        0.0350      Main Channel
                 150.77         427.27        0.0350      Main Channel
                 179.17         427.15        0.0350      Main Channel
                 214.90         427.16        0.0350      Main Channel
                 261.89         427.25        0.0350      Main Channel
                 317.65         427.56        0.0350      Main Channel
                 382.75         427.99        0.0350      Main Channel
                 394.40         428.11        0.0350      Main Channel
                 432.80         428.07        0.0350      Main Channel
                 432.91         428.07        0.0350      Main Channel
                 462.57         428.15        0.0350      Main Channel
                 522.90         429.79    0.0350 /0.0450  Main Channel
                 585.04         429.90        0.0450
                 731.92         430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04       11.5         0.73       2.99
        0.35   427.50    .570E+04       49.9         1.15       1.91
        0.53   427.68    .105E+05      119.2         1.49       1.47
        0.70   427.85    .163E+05      221.8         1.79       1.22
        0.88   428.03    .229E+05      360.8         2.06       1.06
        1.06   428.21    .312E+05      509.7         2.14       1.02
        1.23   428.38    .405E+05      771.0         2.49       0.88
        1.41   428.56    .500E+05     1076.3         2.82       0.77
        1.58   428.73    .598E+05     1423.8         3.12       0.70
        1.76   428.91    .699E+05     1812.5         3.40       0.64
        1.94   429.09    .802E+05     2241.5         3.66       0.60
        2.11   429.26    .907E+05     2709.1         3.91       0.56
        2.29   429.44    .102E+06     3215.8         4.15       0.53
        2.46   429.61    .113E+06     3761.6         4.38       0.50
        2.64   429.79    .124E+06     4346.4         4.59       0.48
        2.85   430.00    .139E+06     5173.9         4.88       0.45
        3.06   430.20    .156E+06     6075.9         5.12       0.43
        3.26   430.41    .173E+06     7054.9         5.33       0.41
        3.47   430.62    .193E+06     8114.3         5.52       0.40

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 (******)     30.08     5.23   10.42 196.81      0.08      0.73
OUTFLOW: ID= 1 (******)     30.08     5.20   10.50 196.81      0.08      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66    0.239    10.17   190.00
      + ID2= 2 (******):    30.08    5.198    10.50   196.81
        ================================================
        ID = 3 (******):    31.74    5.397    10.42   196.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):     31.74      5.40     10.42   196.45
     ================================================
     ID= 2  (   2)    :     31.74      5.40     10.42   196.45
     ID= 3  (   2)    :      0.00      0.00     10.42   196.45
     ID= 4  (   2)    :      0.00      0.00      0.00     0.00
     ID= 5  (   2)    :      0.00      0.00      0.00     0.00
     ID= 6  (   2)    :      0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.32          0.58
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.70          0.60
     Length            (m)=     166.18        124.91
     Mannings n             =     0.013         0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

```
                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        52.18
               over (min)       5.00        10.00
  Storage Coeff.  (min)=       4.98 (ii)    9.14 (ii)
  Unit Hyd. Tpeak (min)=       5.00        10.00
  Unit Hyd. peak  (cms)=       0.22         0.12
                                                    *TOTALS*
  PEAK FLOW       (cms)=       0.34         0.08          0.424 (iii)
  TIME TO PEAK    (hrs)=      10.17        10.17         10.17
  RUNOFF VOLUME    (mm)=     210.34       190.35        206.34
  TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
  RUNOFF COEFFICIENT   =       0.99         0.90          0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN*  =  93.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
  Surface Area     (ha)=       0.96         0.25
  Dep. Storage     (mm)=       2.00         4.48
  Average Slope     (%)=       0.64         0.54
  Length            (m)=      63.89       157.12
  Mannings n          =       0.013        0.030

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        52.18
               over (min)       5.00        15.00
  Storage Coeff.  (min)=       2.88 (ii)   11.52 (ii)
  Unit Hyd. Tpeak (min)=       5.00        15.00
  Unit Hyd. peak  (cms)=       0.28         0.09
                                                    *TOTALS*
  PEAK FLOW       (cms)=       0.14         0.04          0.177 (iii)
  TIME TO PEAK    (hrs)=      10.00        10.17         10.17
  RUNOFF VOLUME    (mm)=     210.34       190.35        206.14
  TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
  RUNOFF COEFFICIENT   =       0.99         0.90          0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN*  =  93.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     2.90   0.424    10.17   206.34
     + ID2= 2 (******):     1.21   0.177    10.17   206.14
       ================================================
       ID = 3 (******):     4.11   0.601    10.17   206.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.85     0.00     0.00     0.00     0.00     0.85
        0.85     1.00     0.00     0.00     0.00     1.85
        0.85   100.00     0.00     0.00     0.00   100.85

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):      4.11      0.60     10.17   206.28
     ================================================
     ID= 2  (   2)    :      4.11      0.60     10.17   206.28
     ID= 3  (   2)    :      0.00      0.00     10.17   206.28
     ID= 4  (   2)    :      0.00      0.00      0.00     0.00
     ID= 5  (   2)    :      0.00      0.00      0.00     0.00
     ID= 6  (   2)    :      0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.00   0.000    10.42   196.45
     + ID2= 2 (******):     4.11   0.601    10.17   206.28
       ================================================
       ID = 3 (******):     4.11   0.601    10.17   206.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     5.20     0.00     0.00     0.00     5.20
        1.00     5.20     0.00     0.00     0.00     6.20
      100.00     5.20     0.00     0.00     0.00   105.20

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):      4.11      0.60     10.17   206.28
     ================================================
     ID= 2  (   2)    :      0.00      0.00     10.17   206.28
     ID= 3  (   2)    :      4.11      0.60     10.17   206.28
     ID= 4  (   2)    :      0.00      0.00      0.00     0.00
     ID= 5  (   2)    :      0.00      0.00      0.00     0.00
     ID= 6  (   2)    :      0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    31.74   5.397    10.42   196.45
     + ID2= 2 (******):     0.00   0.000    10.17   206.28
       ================================================
       ID = 3 (******):    31.74   5.397    10.42   196.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):     31.74      5.40     10.42   196.45
     ================================================
     ID= 2  (   2)    :     31.74      5.40     10.42   196.45
     ID= 3  (   2)    :      0.00      0.00     10.42   196.45
     ID= 4  (   2)    :      0.00      0.00      0.00     0.00
     ID= 5  (   2)    :      0.00      0.00      0.00     0.00
     ID= 6  (   2)    :      0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.01     0.00     0.00     0.00     0.00     0.01
        0.06     0.00     0.00     0.00     0.00     0.06
        0.08     0.00     0.00     0.00     0.00     0.08
        0.12     0.00     0.00     0.00     0.00     0.12
        0.20     0.00     0.00     0.00     0.00     0.20
        0.25     0.00     0.00     0.00     0.00     0.25
        0.30     0.00     0.00     0.00     0.00     0.30
        0.33     0.00     0.00     0.00     0.00     0.33
        0.37     0.00     0.00     0.00     0.00     0.37
        0.39     0.00     0.00     0.00     0.00     0.39
        0.42     1.43     0.00     0.00     0.00     1.85
        0.44     8.83     0.00     0.00     0.00     9.27
        0.47    25.03     0.00     0.00     0.00    25.50
        0.49    52.11     0.00     0.00     0.00    52.61
        0.52    91.81     0.00     0.00     0.00    92.33
        0.53   126.04     0.00     0.00     0.00   126.57

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):     31.74      5.40     10.42   196.45
     ================================================
     ID= 2  (   2)    :      6.92      0.43     10.42   196.45
     ID= 3  (   2)    :     24.81      4.97     10.42   196.45
     ID= 4  (   2)    :      0.00      0.00      0.00     0.00
     ID= 5  (   2)    :      0.00      0.00      0.00     0.00
     ID= 6  (   2)    :      0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
  Surface Area     (ha)=       0.81         0.01
  Dep. Storage     (mm)=       2.00         4.48
  Average Slope     (%)=       0.50         1.00
  Length            (m)=      18.40         0.00
  Mannings n          =       0.013        0.030

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
```

	0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
	0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
	0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
	1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
	1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
	1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
	1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
	1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
	1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
	1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
	1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
	1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
	1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
	1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
	1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
	3.000	6.35	6.083	13.97	9.167	12.70		
	3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	52.18	
over (min)	5.00	5.00	
Storage Coeff. (min)=	1.47 (ii)	1.47 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.33	0.33	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.120 (iii)
TIME TO PEAK (hrs)=	9.67	10.17	10.17
RUNOFF VOLUME (mm)=	210.34	190.35	210.14
TOTAL RAINFALL (mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT =	0.99	0.90	0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 93.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	0.82	0.120	10.17	210.14
+ ID2= 2 (******):	0.00	0.000	10.42	196.45
ID = 3 (******):	0.82	0.120	10.17	210.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (******):	0.82	0.120	10.17	210.14
+ ID2= 2 (******):	24.81	4.967	10.42	196.45
ID = 1 (******):	25.63	5.053	10.42	196.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

DIVERTHYD(******)	
IN= 1	# OUT= 5

Outflow / Inflow Relationships

Flow 1 (cms)	+ Flow 2 (cms)	+ Flow 3 (cms)	+ Flow 4 (cms)	+ Flow 5 (cms)	= Total (cms)
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.03	0.00	0.00	0.00	0.00	0.03
0.04	0.00	0.00	0.00	0.00	0.04
0.09	0.00	0.00	0.00	0.00	0.09
0.12	0.00	0.00	0.00	0.00	0.13
0.20	0.00	0.00	0.00	0.00	0.20
0.30	0.00	0.00	0.00	0.00	0.30
0.37	0.00	0.00	0.00	0.00	0.37
0.43	0.00	0.00	0.00	0.00	0.43
0.48	0.00	0.00	0.00	0.00	0.48
0.52	0.00	0.00	0.00	0.00	0.52
0.57	0.00	0.00	0.00	0.00	0.57
0.67	0.00	0.00	0.00	0.00	0.67
0.68	0.00	0.00	0.00	0.00	0.68
0.68	0.02	0.00	0.00	0.00	0.70
0.72	0.56	0.00	0.00	0.00	1.28
0.73	0.75	0.01	0.00	0.00	1.48
1.10	1.87	0.54	0.00	0.00	3.51
1.40	2.25	2.61	0.00	0.00	6.26

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
TOTAL HYD.(ID= 1):	25.63	5.05	10.42	196.89
ID= 2 (3) :	11.27	1.27	10.42	196.89
ID= 3 (3) :	10.30	2.08	10.42	196.89
ID= 4 (3) :	4.07	1.70	10.42	196.89
ID= 5 (3) :	0.00	0.00	0.00	0.00
ID= 6 (3) :	0.00	0.00	0.00	0.00

ADD HYD (******)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	6.92	0.430	10.42	196.45
+ ID2= 2 (******):	11.27	1.269	10.42	196.89
ID = 3 (******):	18.19	1.699	10.42	196.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (******)|	Area (ha)= 11.36 Curve Number (CN)= 93.0
ID= 1 DT= 5.0 min |	Ia (mm)= 4.48 # of Linear Res.(N)= 3.00
----------	U.H. Tp(hrs)= 0.33

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 1.315

PEAK FLOW (cms)= 1.581 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 190.301
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.896

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
NASHYD (40600)|	Area (ha)= 78.37
ID= 1 DT= 5.0 min |	Total Imp(%)= 69.08 Dir. Conn.(%)= 56.26

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	54.14	24.23
Dep. Storage (mm)=	2.00	5.78
Average Slope (%)=	1.20	1.20
Length (m)=	722.82	47.00
Mannings n =	0.015	0.260

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)= 0.130

PEAK FLOW (cms)= 0.108 (i)
TIME TO PEAK (hrs)= 10.167
RUNOFF VOLUME (mm)= 190.102
TOTAL RAINFALL (mm)= 212.340
RUNOFF COEFFICIENT = 0.895

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (40600)|	Area (ha)= 78.37
ID= 1 DT= 5.0 min |	Total Imp(%)= 69.08 Dir. Conn.(%)= 56.26

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	54.14	24.23
Dep. Storage (mm)=	2.00	5.78
Average Slope (%)=	1.20	1.20
Length (m)=	722.82	47.00
Mannings n =	0.015	0.260

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	73.72	
over (min)	10.00	25.00	

```
      Storage Coeff.  (min)=      11.15 (ii)   21.63 (ii)
      Unit Hyd. Tpeak (min)=      10.00        25.00
      Unit Hyd. peak  (cms)=       0.10         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       6.44         4.57        10.965 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.25         10.17
      RUNOFF VOLUME    (mm)=     210.34       190.05        201.46
      TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
      RUNOFF COEFFICIENT   =       0.99         0.90          0.95

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        144.07        0.0450
                   9.00        143.84        0.0450
                  12.00        142.90        0.0450
                  15.00        142.48        0.0450
                  18.00        142.43    0.0450 /0.0350  Main Channel
                  21.00        142.31        0.0350      Main Channel
                  24.00        142.12        0.0350      Main Channel
                  27.00        142.44    0.0350 /0.0450  Main Channel
                  30.00        142.71        0.0450
                  33.00        143.18        0.0450
                  36.00        143.27        0.0450
                  37.00        143.36        0.0450
                  38.00        143.64        0.0450
                  39.00        143.92        0.0450
                  40.00        143.93        0.0450
                  45.00        144.18        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.08  142.20   .282E+02       0.0         0.24       26.26
       0.16  142.27   .113E+03       0.1         0.38       16.54
       0.23  142.35   .257E+03       0.3         0.48       13.09
       0.31  142.43   .477E+03       0.7         0.57       11.02
       0.42  142.54   .969E+03       2.0         0.76        8.24
       0.53  142.65   .157E+04       3.8         0.92        6.80
       0.64  142.76   .224E+04       6.3         1.06        5.90
       0.75  142.87   .299E+04       9.5         1.19        5.26
       0.86  142.98   .379E+04      13.2         1.31        4.77
       0.97  143.09   .463E+04      17.6         1.43        4.37
       1.08  143.20   .552E+04      22.5         1.53        4.09
       1.19  143.31   .653E+04      27.9         1.60        3.90
       1.30  143.42   .761E+04      34.4         1.70        3.69
       1.41  143.53   .874E+04      41.7         1.79        3.49
       1.52  143.64   .989E+04      49.7         1.89        3.32
       1.63  143.75   .111E+05      58.3         1.98        3.17
       1.74  143.85   .123E+05      66.9         2.04        3.06
       1.85  143.96   .137E+05      73.2         2.01        3.11
       1.96  144.07   .153E+05      81.5         2.00        3.13

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 40600)   78.37    10.97   10.17 201.46      0.79      1.24
   OUTFLOW: ID= 1 ( 60600)   78.37    10.86   10.17 201.46      0.79      1.23


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| CALIB             |
| STANDHYD ( 40610)|   Area     (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75          2.18
     Dep. Storage     (mm)=       2.00          8.00
     Average Slope     (%)=       2.90          2.90
     Length            (m)=     162.03         40.00
     Mannings n           =      0.015         0.340

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        63.51
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.49 (ii)   12.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.18         0.38        0.563 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       181.12        190.36
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.85          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  88.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40610):     3.94   0.563    10.17   190.36
     + ID2= 2 ( 60600):    78.37  10.861    10.17   201.46
       ==========================================================
       ID = 3 ( 50600):    82.31  11.423    10.17   200.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        143.40        0.0450
                   2.00        142.92        0.0450
                   4.00        142.14        0.0450
                   6.00        141.49        0.0450
                   8.00        141.11        0.0450
                  10.00        141.00    0.0450 /0.0350  Main Channel
                  12.00        140.98        0.0350      Main Channel
                  14.00        140.82        0.0350      Main Channel
                  16.00        141.02    0.0350 /0.0450  Main Channel
                  18.00        141.19        0.0450
                  20.00        141.19        0.0450
                  22.00        141.44        0.0450
                  24.00        142.00        0.0450
                  26.00        142.20        0.0450
                  28.00        142.39        0.0450
                  30.00        142.96        0.0450
                  31.00        143.13        0.0450
                  32.00        143.28        0.0450
                  33.00        143.41        0.0450
                  34.00        143.44        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09  140.91   .314E+02       0.0         0.24       23.12
       0.18  141.00   .132E+03       0.1         0.31       17.83
       0.33  141.14   .502E+03       0.9         0.58        9.54
       0.47  141.29   .107E+04       2.4         0.74        7.47
       0.61  141.43   .175E+04       4.7         0.89        6.20
       0.75  141.57   .251E+04       7.9         1.05        5.31
       0.89  141.71   .332E+04      11.8         1.19        4.68
       1.03  141.85   .416E+04      16.5         1.32        4.21
       1.17  141.99   .506E+04      21.8         1.44        3.86
       1.31  142.13   .601E+04      27.5         1.52        3.64
       1.45  142.27   .705E+04      34.0         1.61        3.46
       1.59  142.41   .818E+04      41.5         1.69        3.29
       1.73  142.55   .936E+04      50.2         1.79        3.11
       1.88  142.69   .106E+05      59.8         1.88        2.95
       2.02  142.84   .118E+05      70.2         1.97        2.81
       2.16  142.98   .132E+05      81.2         2.06        2.70
       2.30  143.12   .145E+05      92.6         2.12        2.61
       2.44  143.26   .159E+05     104.8         2.19        2.54
       2.58  143.40   .174E+05     117.7         2.24        2.47

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50600)   82.31    11.42   10.17 200.93      0.88      1.17
   OUTFLOW: ID= 1 ( 60610)   82.31    11.39   10.25 200.93      0.87      1.17


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| CALIB             |
| STANDHYD ( 40620)|   Area     (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30          1.37
     Dep. Storage     (mm)=       2.00          5.59
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     194.41         43.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        85.18
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.74 (ii)   13.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.50         0.32        0.823 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       192.91        203.48
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.91          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40620):     5.67   0.823    10.17   203.48
     + ID2= 2 ( 60610):    82.31  11.388    10.25   200.93
       ==========================================================
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        ID = 3 ( 50610):    87.98  12.143    10.17   201.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        142.03        0.0450
                    1.00        141.71        0.0450
                    2.00        141.35        0.0450
                    3.00        141.01        0.0450
                    4.00        140.79        0.0450
                    5.00        140.56        0.0450
                    6.00        140.44        0.0450
                    7.00        140.30    0.0450 /0.0350  Main Channel
                    8.00        140.08        0.0350      Main Channel
                    9.00        139.88        0.0350      Main Channel
                   10.00        139.97        0.0350      Main Channel
                   11.00        140.12        0.0350      Main Channel
                   12.00        140.35    0.0350 /0.0450  Main Channel
                   13.00        140.52        0.0450
                   14.00        140.73        0.0450
                   15.00        140.97        0.0450
                   16.00        141.27        0.0450
                   17.00        141.57        0.0450
                   18.00        141.89        0.0450
                   19.00        142.07        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02       0.0         0.36       8.21
        0.21   140.09    .579E+02       0.2         0.59       5.04
        0.31   140.19    .120E+03       0.5         0.78       3.79
        0.42   140.30    .200E+03       1.1         0.95       3.12
        0.53   140.41    .313E+03       2.1         1.18       2.51
        0.65   140.53    .456E+03       3.5         1.36       2.18
        0.76   140.65    .630E+03       5.3         1.50       1.98
        0.88   140.76    .826E+03       7.6         1.63       1.82
        0.99   140.88    .104E+04      10.3         1.75       1.69
        1.11   140.99    .128E+04      13.4         1.87       1.59
        1.23   141.11    .154E+04      17.1         1.98       1.50
        1.34   141.22    .180E+04      21.2         2.09       1.42
        1.46   141.34    .209E+04      25.8         2.20       1.35
        1.57   141.45    .239E+04      30.9         2.30       1.29
        1.69   141.57    .270E+04      36.4         2.40       1.24
        1.80   141.69    .303E+04      42.4         2.49       1.19
        1.92   141.80    .337E+04      48.9         2.58       1.15
        2.04   141.92    .373E+04      55.9         2.67       1.11
        2.15   142.03    .411E+04      63.2         2.74       1.08

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.  MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98    12.14   10.17 201.09      1.06      1.82
   OUTFLOW: ID= 1 ( 60620)   87.98    12.14   10.25 201.09      1.06      1.82


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--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        61.46
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.41 (ii)   14.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.20       0.303 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.17       10.17
     RUNOFF VOLUME    (mm)=     210.34       182.58      191.35
     TOTAL RAINFALL   (mm)=     212.34       212.34      212.34
     RUNOFF COEFFICIENT   =       0.99         0.86        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40640):      2.13    0.303    10.17   191.35
     + ID2= 2 ( 60620):     87.98   12.142    10.25   201.09
       ==================================================
       ID = 3 ( 50630):     90.11   12.421    10.25   200.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        68.32
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       7.12 (ii)   16.99 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.59         1.35        2.932 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17       10.17
     RUNOFF VOLUME    (mm)=     210.34       188.33      199.92
     TOTAL RAINFALL   (mm)=     212.34       212.34      212.34
     RUNOFF COEFFICIENT   =       0.99         0.89        0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40630):     20.54    2.932    10.17   199.92
     + ID2= 2 ( 50630):     90.11   12.421    10.25   200.86
       ==================================================
       ID = 3 ( 50640):    110.65   15.332    10.17   200.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):      0.75    0.108    10.17   190.10
     + ID2= 2 ( 50640):    110.65   15.332    10.17   200.69
       ==================================================
       ID = 3 (******):    111.40   15.440    10.17   200.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     11.36    1.581    10.25   190.30
     + ID2= 2 (******):    111.40   15.440    10.17   200.62
       ==================================================
       ID = 3 (******):    122.76   17.020    10.17   199.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        447.10        0.0450
                   42.83        446.80        0.0450
                   42.89        446.80        0.0450
                   43.24        446.79        0.0450
                  122.57        446.48        0.0450
                  154.02        446.22        0.0450
                  191.79        446.32    0.0450 /0.0350  Main Channel
                  199.05        442.27        0.0350      Main Channel
                  199.74        442.33        0.0350      Main Channel
                  212.02        444.19        0.0350      Main Channel
                  232.17        444.54    0.0350 /0.0450  Main Channel
                  348.58        444.42        0.0450
                  359.23        444.30        0.0450
                  381.33        444.03        0.0450
                  483.65        444.18        0.0450
                  548.64        445.87        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.19   442.46    .184E+03       0.1         0.65      24.29
        0.38   442.65    .662E+03       0.7         1.01      15.64
        0.57   442.84    .143E+04       2.0         1.31      12.09
        0.76   443.03    .247E+04       4.1         1.57      10.05
        0.95   443.22    .381E+04       7.3         1.81       8.70
        1.14   443.41    .543E+04      11.7         2.04       7.73
        1.33   443.60    .733E+04      17.5         2.26       6.99
        1.52   443.79    .952E+04      24.8         2.46       6.41
        1.71   443.98    .120E+05      33.7         2.66       5.93
        1.89   444.16    .211E+05      47.0         2.11       7.49
        2.08   444.35    .469E+05      73.0         1.47      10.71
        2.27   444.54    .855E+05     117.6         1.30      12.12
        2.46   444.73    .140E+06     240.0         1.62       9.75
        2.65   444.92    .197E+06     400.4         1.92       8.20
        2.84   445.11    .255E+06     595.0         2.21       7.13
        3.03   445.30    .314E+06     821.8         2.48       6.37
```

```
        3.22   445.49    .374E+06    1079.2          2.73       5.78
        3.41   445.68    .436E+06    1366.3          2.96       5.32
        3.60   445.87    .500E+06    1682.3          3.19       4.95

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  122.76    17.02   10.17 199.66      1.31      2.24
   OUTFLOW: ID= 1 (******)  122.76    16.83   10.25 199.66      1.31      2.23
```

```
| CALIB           |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.065 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.909
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.894
```

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.45   0.065    10.17   189.91
     + ID2= 2 (******):   122.76  16.829    10.25   199.66
       ================================================
       ID = 3 (******):   123.21  16.891    10.25   199.63
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| CALIB           |
| NASHYD   (******)|   Area    (ha)=   0.39   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
     Unit Hyd Qpeak  (cms)=   0.083

     PEAK FLOW       (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.806
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.894
```

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| CALIB           |
| NASHYD   (******)|   Area    (ha)=   2.19   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.312 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.240
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896
```

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.39   0.056    10.17   189.81
     + ID2= 2 (******):     2.19   0.312    10.17   190.24
       ================================================
       ID = 3 (******):     2.58   0.369    10.17   190.17
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 3 (******):     2.58   0.369    10.17   190.17
     + ID2= 2 (******):   123.21  16.891    10.25   199.63
       ================================================
       ID = 1 (******):   125.79  17.253    10.25   199.43
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         429.12        0.0450
                   37.54         428.86        0.0450
                   53.31         428.70        0.0450
                   81.17         428.24        0.0450
                   99.28         428.15    0.0450 /0.0350  Main Channel
                  114.53         427.72        0.0350      Main Channel
                  119.88         426.51        0.0350      Main Channel
                  124.17         425.84        0.0350      Main Channel
                  206.01         425.90        0.0350      Main Channel
                  209.64         426.51        0.0350      Main Channel
                  214.21         426.89        0.0350      Main Channel
                  231.49         427.17        0.0350      Main Channel
                  268.61         427.89    0.0350 /0.0450  Main Channel
                  351.58         428.15        0.0450
                  368.27         428.31        0.0450
                  405.75         428.52        0.0450
                  416.79         428.59        0.0450
                  440.06         428.76        0.0450
                  469.88         428.97        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.16  426.00    .218E+04       4.1         0.39       8.87
        0.31  426.16    .495E+04      15.8         0.67       5.22
        0.47  426.32    .779E+04      33.2         0.89       3.92
        0.63  426.47    .107E+05      55.4         1.08       3.22
        0.79  426.63    .137E+05      81.8         1.25       2.78
        0.94  426.79    .167E+05     112.4         1.40       2.48
        1.10  426.95    .199E+05     144.6         1.52       2.29
        1.26  427.10    .233E+05     176.4         1.58       2.20
        1.42  427.26    .271E+05     214.5         1.65       2.11
        1.57  427.42    .312E+05     258.4         1.73       2.01
        1.73  427.58    .356E+05     307.7         1.81       1.93
        1.89  427.73    .402E+05     362.0         1.88       1.85
        2.05  427.89    .452E+05     415.1         1.91       1.82
        2.23  428.07    .525E+05     501.3         1.99       1.74
        2.41  428.25    .621E+05     609.1         2.05       1.70
        2.59  428.43    .733E+05     739.1         2.10       1.65
        2.77  428.61    .862E+05     886.8         2.15       1.62
        2.95  428.79    .101E+06    1053.9         2.19       1.59
        3.13  428.97    .116E+06    1240.2         2.22       1.57

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  125.79    17.25   10.25 199.43      0.33      0.68
   OUTFLOW: ID= 1 (******)  125.79    17.15   10.33 199.43      0.33      0.68
```

```
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         443.75        0.0000
                    8.50         443.74        0.0450
                   35.47         443.64        0.0450
                   64.60         443.29        0.0450
                   74.71         443.18        0.0450
                   80.25         443.17        0.0450
                  112.17         443.12    0.0450 /0.0350  Main Channel
                  131.57         442.76        0.0350      Main Channel
                  137.50         442.66        0.0350      Main Channel
                  137.91         442.67        0.0350      Main Channel
```

```
                152.28        442.24        0.0350      Main Channel
                167.40        441.39        0.0350      Main Channel
                178.29        441.56        0.0350      Main Channel
                216.75        442.01        0.0350      Main Channel
                221.54        442.05    0.0350 /0.0450  Main Channel
                334.66        442.50        0.0450

     <--------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.05   441.45    .216E+02       0.0          0.17       16.51
      0.11   441.50    .864E+02       0.1          0.28       10.40
      0.16   441.56    .194E+03       0.4          0.36        7.94
      0.22   441.61    .350E+03       0.9          0.43        6.75
      0.27   441.67    .561E+03       1.6          0.49        5.86
      0.33   441.72    .825E+03       2.6          0.55        5.20
      0.38   441.78    .114E+04       4.1          0.62        4.68
      0.44   441.83    .152E+04       5.9          0.67        4.27
      0.49   441.89    .194E+04       8.2          0.73        3.94
      0.55   441.94    .242E+04      11.0          0.79        3.67
      0.60   442.00    .296E+04      14.3          0.84        3.44
      0.66   442.05    .355E+04      18.1          0.88        3.27
      0.71   442.11    .425E+04      23.6          0.96        3.00
      0.78   442.17    .523E+04      31.0          1.02        2.82
      0.84   442.24    .641E+04      39.6          1.07        2.70
      0.91   442.30    .778E+04      49.3          1.10        2.63
      0.97   442.36    .935E+04      60.5          1.12        2.57
      1.03   442.43    .111E+05      73.5          1.14        2.52
      1.10   442.49    .131E+05      88.2          1.16        2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 (******)   20.89     1.03   10.33 197.98      0.23      0.44
   OUTFLOW: ID= 1 (******)   20.89     1.02   10.42 197.98      0.23      0.44



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.553 (i)
     TIME TO PEAK    (hrs)=  10.333
     RUNOFF VOLUME    (mm)= 190.339
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.24   0.553    10.33   190.34
      + ID2= 2 (******):    20.89   1.024    10.42   197.98
        ================================================
        ID = 3 (******):    25.13   1.575    10.42   196.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.367 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.268
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.59   0.367    10.17   190.27
      + ID2= 2 (******):    25.13   1.575    10.42   196.69
        ================================================
        ID = 3 (******):    27.72   1.924    10.33   196.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00        429.12        0.0500
                  37.54        428.86        0.0500
                  53.31        428.70        0.0500
                  81.17        428.24        0.0500
                  99.28        428.15    0.0500 /0.0300  Main Channel
                 114.53        427.72        0.0300      Main Channel
                 119.88        426.51        0.0300      Main Channel
                 124.17        425.84        0.0300      Main Channel
                 206.01        425.90        0.0300      Main Channel
                 209.64        426.51        0.0300      Main Channel
                 214.21        426.89        0.0300      Main Channel
                 231.49        427.17        0.0300      Main Channel
                 268.61        427.89    0.0300 /0.0500  Main Channel
                 351.58        428.15        0.0500
                 368.27        428.31        0.0500
                 405.75        428.52        0.0500
                 416.79        428.59        0.0500
                 440.06        428.76        0.0500
                 469.88        428.97        0.0500

     <--------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.16   426.00    .187E+04       9.2          0.88        3.40
      0.31   426.16    .424E+04      35.4          1.49        2.00
      0.47   426.32    .666E+04      74.1          1.98        1.50
      0.63   426.47    .914E+04     123.7          2.41        1.23
      0.79   426.63    .117E+05     182.8          2.79        1.07
      0.94   426.79    .143E+05     251.2          3.13        0.95
      1.10   426.95    .170E+05     323.1          3.39        0.88
      1.26   427.10    .199E+05     394.0          3.52        0.84
      1.42   427.26    .232E+05     479.1          3.69        0.81
      1.57   427.42    .267E+05     577.3          3.86        0.77
      1.73   427.58    .304E+05     687.4          4.03        0.74
      1.89   427.73    .344E+05     808.6          4.20        0.71
      2.05   427.89    .387E+05     927.4          4.28        0.70
      2.23   428.07    .449E+05    1119.2          4.45        0.67
      2.41   428.25    .531E+05    1356.2          4.56        0.65
      2.59   428.43    .627E+05    1638.9          4.66        0.64
      2.77   428.61    .737E+05    1955.8          4.73        0.63
      2.95   428.79    .859E+05    2310.2          4.79        0.62
      3.13   428.97    .996E+05    2701.5          4.84        0.61

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 (******)   27.72     1.92   10.33 196.09      0.03      0.88
   OUTFLOW: ID= 1 (******)   27.72     1.92   10.42 196.09      0.03      0.88



--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):   125.79  17.154    10.33   199.43
      + ID2= 2 (******):    27.72   1.918    10.42   196.09
        ================================================
        ID = 3 (******):   153.51  19.071    10.33   198.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.98         3.60
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.91         1.12
     Length            (m)=     246.54       157.18
     Mannings n           =      0.015        0.300

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
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                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.10
                  over (min)       5.00        35.00
     Storage Coeff.  (min)=       6.35 (ii)   33.99 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.19         0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.73         0.44        1.134 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.50        10.17
     RUNOFF VOLUME    (mm)=     210.34       190.35       201.94
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.90         0.95

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     8.58   1.134    10.17   201.94
     + ID2= 2 (******):   153.51  19.071    10.33   198.83
       ==========================================================
       ID = 3 ( 50650):   162.09  20.065    10.33   198.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50650):   162.09  20.065    10.33   198.99
     + ID2= 2 (******):    18.19   1.699    10.42   196.72
       ==========================================================
       ID = 1 ( 50650):   180.28  21.750    10.33   198.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         129.45        0.0450
                  6.00         129.24        0.0450
                  8.00         128.92        0.0450
                 10.00         128.26        0.0450
                 12.00         127.37        0.0450
                 14.00         126.79        0.0450
                 16.00         126.20        0.0450
                 18.00         125.80        0.0450
                 21.00         125.29        0.0450
                 24.00         124.85        0.0450
                 27.00         124.54        0.0350      Main Channel
                 30.00         124.62        0.0350      Main Channel
                 33.00         124.84    0.0350 /0.0450  Main Channel
                 36.00         125.26        0.0450
                 39.00         125.86        0.0450
                 42.00         126.49        0.0450
                 48.00         128.97        0.0450
                 54.00         129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.26   124.80    .401E+03       0.4         0.30      18.82
        0.51   125.06    .127E+04       1.9         0.51      11.03
        0.77   125.31    .246E+04       4.8         0.66       8.52
        1.03   125.57    .390E+04       9.1         0.78       7.15
        1.28   125.83    .559E+04      14.9         0.89       6.28
        1.54   126.08    .751E+04      22.2         0.99       5.64
        1.80   126.34    .963E+04      31.2         1.09       5.15
        2.05   126.60    .119E+05      42.0         1.18       4.73
        2.31   126.85    .144E+05      54.6         1.27       4.39
        2.57   127.11    .169E+05      68.8         1.36       4.10
        2.82   127.37    .196E+05      84.6         1.44       3.87
        3.08   127.62    .225E+05     102.4         1.53       3.65
        3.34   127.88    .254E+05     121.9         1.61       3.47
        3.59   128.14    .284E+05     142.9         1.69       3.31
        3.85   128.40    .315E+05     165.4         1.76       3.18
        4.11   128.65    .348E+05     189.3         1.82       3.06
        4.36   128.91    .381E+05     215.0         1.89       2.96
        4.62   129.17    .417E+05     235.7         1.89       2.95
        4.88   129.42    .459E+05     248.7         1.82       3.07

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50650)  180.28    21.75   10.33 198.76      1.53       0.98
   OUTFLOW: ID= 1 ( 60650)  180.28    21.56   10.42 198.76      1.51       0.98

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--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       37.06         13.71
     Dep. Storage     (mm)=        2.00          6.10
     Average Slope     (%)=        1.50          1.50
     Length            (m)=      581.73         82.00
     Mannings n            =       0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.45
                  over (min)      10.00        30.00
     Storage Coeff.  (min)=       9.15 (ii)   25.43 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.12         0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=       5.36         1.81        7.108 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.33        10.17
     RUNOFF VOLUME    (mm)=     210.34       182.41       202.52
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.86         0.95

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40670):    50.76   7.108    10.17   202.52
     + ID2= 2 ( 60650):   180.28  21.565    10.42   198.76
       ==========================================================
       ID = 3 ( 50670):   231.04  28.180    10.25   199.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         115.77        0.0450
                 20.00         115.51        0.0450
                 24.00         114.73        0.0450
                 28.00         113.17    0.0450 /0.0350  Main Channel
                 32.00         113.16    0.0350 /0.0450  Main Channel
                 36.00         114.68        0.0450
                 40.00         115.05        0.0450
                 44.00         115.27        0.0450
                 48.00         115.46        0.0450
                 52.00         115.71        0.0450
                 54.00         115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14   113.30    .439E+03       0.4         0.65      19.93
        0.27   113.43    .975E+03       1.3         1.01      12.84
        0.41   113.57    .159E+04       2.6         1.28      10.09
        0.55   113.71    .228E+04       4.4         1.51       8.57
        0.69   113.84    .304E+04       6.7         1.70       7.59
        0.82   113.98    .388E+04       9.4         1.88       6.89
        0.96   114.12    .480E+04      12.6         2.03       6.36
        1.10   114.26    .579E+04      16.2         2.18       5.94
        1.24   114.39    .686E+04      20.4         2.31       5.60
        1.37   114.53    .800E+04      25.1         2.43       5.32
        1.51   114.67    .922E+04      30.3         2.55       5.08
        1.65   114.81    .106E+05      35.3         2.59       5.00
        1.78   114.94    .122E+05      41.1         2.62       4.93
        1.92   115.08    .140E+05      47.8         2.65       4.87
        2.06   115.22    .161E+05      55.3         2.66       4.86
        2.20   115.35    .186E+05      64.0         2.67       4.84
        2.33   115.49    .214E+05      74.1         2.68       4.82
        2.47   115.63    .250E+05      80.6         2.50       5.17
        2.61   115.77    .300E+05      92.4         2.39       5.41

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50670)  231.04    28.18   10.25 199.59      1.45       2.50
   OUTFLOW: ID= 1 ( 60670)  231.04    28.01   10.33 199.59      1.45       2.49

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--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        6.22          4.63
     Dep. Storage     (mm)=        2.00          8.04
     Average Slope     (%)=        2.30          2.30
     Length            (m)=      269.03         47.00
     Mannings n            =       0.015         0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.49
                  over (min)       5.00        20.00
     Storage Coeff.  (min)=       5.07 (ii)   16.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.21         0.06
                                                        *TOTALS*
```

```
      PEAK FLOW       (cms)=       0.88         0.67          1.551 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
      RUNOFF VOLUME    (mm)=     210.34       183.31         198.20
      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
      RUNOFF COEFFICIENT   =       0.99         0.86           0.93

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  91.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40700):    10.86   1.551    10.17   198.20
      + ID2= 2 ( 60670):   231.04  28.010    10.33   199.59
        ====================================================
        ID = 3 ( 50680):   241.90  29.331    10.33   199.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50         0.69
     Dep. Storage     (mm)=       2.00         7.98
     Average Slope     (%)=       0.60         0.60
     Length            (m)=      89.27        69.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
     Max.Eff.Inten.(mm/hr)=      52.83        54.20
                 over (min)        5.00        30.00
     Storage Coeff.  (min)=       3.91 (ii)   25.88 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.25         0.04
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.09          0.158 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.33          10.17
     RUNOFF VOLUME    (mm)=     210.34       181.04         192.43
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.85           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       7.93        17.56
     Dep. Storage     (mm)=       2.00         8.01
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     412.26        40.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
     Max.Eff.Inten.(mm/hr)=      52.83        54.06
                 over (min)        5.00        20.00
     Storage Coeff.  (min)=       5.99 (ii)   15.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.19         0.07
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.03         2.54           3.570 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       178.69         187.40
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.84           0.88

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20    0.158    10.17   192.43
      + ID2= 2 ( 40690):    25.49    3.570    10.17   187.40
        ====================================================
        ID = 3 ( 50690):    26.69    3.728    10.17   187.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   241.90   29.331    10.33   199.53
      + ID2= 2 ( 50690):    26.69    3.728    10.17   187.62
        ====================================================
        ID = 3 ( 50700):   268.58   32.812    10.25   198.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         109.54        0.0450
                   4.00         108.85        0.0450
                   8.00         108.76        0.0450
                  12.00         108.31        0.0450
                  16.00         107.44        0.0450
                  20.00         107.22        0.0450
                  24.00         107.06        0.0450
                  28.00         107.10        0.0450
                  32.00         107.04        0.0450
                  36.00         106.98        0.0450
                  40.00         106.83        0.0350      Main Channel
                  44.00         106.49        0.0350      Main Channel
                  48.00         106.92    0.0350 /0.0450  Main Channel
                  52.00         107.19        0.0450
                  56.00         107.11        0.0450
                  60.00         107.14        0.0450
                  64.00         107.27        0.0450
                  68.00         107.71        0.0450
                  72.00         108.37        0.0450
                  80.00         109.55        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)    (cu.m.)      (cms)        (m/s)      (min)
         0.12   106.60    .128E+03       0.1         0.43      35.47
         0.23   106.72    .513E+03       0.4         0.69      22.34
         0.35   106.83    .115E+04       1.1         0.90      17.05
         0.52   107.00    .277E+04       3.6         1.21      12.69
         0.69   107.17    .675E+04       8.9         1.21      12.64
         0.86   107.34    .135E+05      19.9         1.35      11.35
         1.02   107.51    .211E+05      36.3         1.58       9.70
         1.19   107.68    .291E+05      57.8         1.82       8.39
         1.36   107.85    .375E+05      84.0         2.06       7.43
         1.53   108.02    .461E+05     114.5         2.28       6.71
         1.70   108.19    .550E+05     149.1         2.49       6.15
         1.87   108.35    .642E+05     187.4         2.68       5.71
         2.04   108.52    .737E+05     228.8         2.85       5.37
         2.21   108.69    .837E+05     274.1         3.01       5.09
         2.37   108.86    .942E+05     316.2         3.08       4.97
         2.54   109.03    .105E+06     372.6         3.25       4.72
         2.71   109.20    .117E+06     433.4         3.40       4.50
         2.88   109.37    .129E+06     498.6         3.55       4.31
         3.05   109.54    .141E+06     568.2         3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)   268.58    32.81   10.25 198.34      0.99      1.52
   OUTFLOW: ID= 1 ( 60700)   268.58    32.29   10.42 198.34      0.98      1.51
```

```
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n           =      0.015        0.360

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70

```
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.27
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.68 (ii)   13.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.25         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.19         0.71          0.904 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       180.13        186.40
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.85          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.904    10.17   186.40
      + ID2= 2 ( 60700):   268.58  32.292    10.42   198.34
        ================================================
        ID = 3 ( 50710):   274.94  33.051    10.42   198.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.90
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       6.01 (ii)   10.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.19         0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       3.07         0.58          3.656 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       183.03        205.88
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.86          0.97

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.76
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       5.02 (ii)   13.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.21         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.56         0.50          2.055 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       182.15        203.29
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.86          0.96


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40720):    25.04   3.656    10.17   205.88
      + ID2= 2 ( 40730):    14.15   2.055    10.17   203.29
        ================================================
        ID = 3 ( 50730):    39.19   5.711    10.17   204.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50730):    39.19   5.711    10.17   204.94
      + ID2= 2 ( 50710):   274.94  33.051    10.42   198.07
        ================================================
        ID = 1 ( 50730):   314.13  37.456    10.33   198.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         96.28        0.0450
                  9.00         95.39        0.0450
                 12.00         94.87        0.0450
                 15.00         94.17        0.0450
                 18.00         93.95        0.0450
                 21.00         94.01        0.0450
                 24.00         93.92        0.0450
                 27.00         93.98    0.0450 /0.0350  Main Channel
                 30.00         93.33        0.0350      Main Channel
                 32.00         93.73    0.0350 /0.0450  Main Channel
                 34.00         94.58        0.0450
                 35.00         95.06        0.0450
                 40.00         95.32        0.0450
                 45.00         96.12        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)       (min)
        0.13   93.46    .164E+03       0.0         0.36       89.51
        0.26   93.60    .654E+03       0.2         0.57       56.39
        0.40   93.73    .147E+04       0.6         0.75       43.03
        0.55   93.88    .274E+04       1.4         0.99       32.63
        0.70   94.03    .550E+04       2.8         1.00       32.28
        0.85   94.18    .104E+05       5.8         1.08       29.94
        1.00   94.33    .159E+05      10.1         1.24       26.04
        1.15   94.48    .216E+05      15.6         1.41       22.97
        1.29   94.63    .275E+05      22.2         1.57       20.64
        1.44   94.78    .338E+05      29.9         1.72       18.84
        1.59   94.93    .404E+05      38.6         1.86       17.44
        1.74   95.08    .473E+05      48.0         1.97       16.40
        1.89   95.23    .549E+05      58.1         2.05       15.76
        2.04   95.38    .637E+05      70.1         2.14       15.14
        2.19   95.53    .731E+05      83.0         2.21       14.67
        2.34   95.68    .833E+05      97.5         2.27       14.23
        2.49   95.83    .941E+05     113.5         2.34       13.82
        2.64   95.98    .106E+06     131.2         2.41       13.42
        2.79   96.13    .118E+06     150.7         2.48       13.05

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50730)  314.13    37.46   10.33 198.93       1.58       1.84
   OUTFLOW: ID= 1 ( 60730)  314.13    36.07   10.67 198.93       1.55       1.81


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| CALIB            |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      56.24        13.19
     Dep. Storage     (mm)=       2.00         5.50
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     680.34        43.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
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                1.250    4.32 |  4.333   16.76 |  7.417   12.70 |  10.50   37.85
                1.333    4.32 |  4.417   16.76 |  7.500   12.70 |  10.58   37.85
                1.417    4.32 |  4.500   16.76 |  7.583   12.70 |  10.67   37.85
                1.500    4.32 |  4.583   16.76 |  7.667   12.70 |  10.75   37.85
                1.583    4.32 |  4.667   16.76 |  7.750   12.70 |  10.83   37.85
                1.667    4.32 |  4.750   16.76 |  7.833   12.70 |  10.92   37.85
                1.750    4.32 |  4.833   16.76 |  7.917   12.70 |  11.00   37.85
                1.833    4.32 |  4.917   16.76 |  8.000   12.70 |  11.08   37.85
                1.917    4.32 |  5.000   16.76 |  8.083   12.70 |  11.17   37.85
                2.000    4.32 |  5.083   16.76 |  8.167   12.70 |  11.25   12.70
                2.083    4.32 |  5.167   16.76 |  8.250   12.70 |  11.33   12.70
                2.167    4.32 |  5.250   13.97 |  8.333   12.70 |  11.42   12.70
                2.250    6.35 |  5.333   13.97 |  8.417   12.70 |  11.50   12.70
                2.333    6.35 |  5.417   13.97 |  8.500   12.70 |  11.58   12.70
                2.417    6.35 |  5.500   13.97 |  8.583   12.70 |  11.67   12.70
                2.500    6.35 |  5.583   13.97 |  8.667   12.70 |  11.75   12.70
                2.583    6.35 |  5.667   13.97 |  8.750   12.70 |  11.83   12.70
                2.667    6.35 |  5.750   13.97 |  8.833   12.70 |  11.92   12.70
                2.750    6.35 |  5.833   13.97 |  8.917   12.70 |  12.00   12.70
                2.833    6.35 |  5.917   13.97 |  9.000   12.70 |  12.08   12.70
                2.917    6.35 |  6.000   13.97 |  9.083   12.70 |  12.17   12.70
                3.000    6.35 |  6.083   13.97 |  9.167   12.70 |
                3.083    6.35 |  6.167   13.97 |  9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.33
               over (min)        10.00        25.00
     Storage Coeff.  (min)=       9.68 (ii)    20.03 (ii)
     Unit Hyd. Tpeak (min)=      10.00        25.00
     Unit Hyd. peak  (cms)=       0.11         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       8.13         1.85          9.971 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25          10.17
     RUNOFF VOLUME    (mm)=     210.34       183.38         204.95
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.86           0.97

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40770):    69.43    9.971    10.17   204.95
     + ID2= 2 ( 60730):   314.13   36.066    10.67   198.93
       ================================================
       ID = 3 ( 50770):   383.56   43.818    10.58   200.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         92.38        0.0450
                   3.00         90.34        0.0450
                   6.00         89.94        0.0450
                   9.00         89.83        0.0450
                  12.00         89.80        0.0450
                  15.00         89.72        0.0450
                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15        0.0350      Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76        0.0450
                  30.00         89.78        0.0450
                  33.00         89.79        0.0450
                  36.00         89.80        0.0450
                  39.00         89.72        0.0450
                  42.00         90.35        0.0450
                  45.00         91.36        0.0450
                  48.00         92.10        0.0450
                  51.00         92.21        0.0450
                  54.00         92.34        0.0450
                  56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15    89.29    .298E+02        0.0         0.31      13.27
        0.29    89.44    .119E+03        0.2         0.50       8.36
        0.44    89.58    .268E+03        0.7         0.65       6.38
        0.61    89.76    .588E+03        1.9         0.79       5.25
        0.78    89.93    .179E+04        5.1         0.71       5.86
        0.96    90.10    .329E+04       11.4         0.87       4.79
        1.13    90.27    .489E+04       20.2         1.03       4.03
        1.30    90.45    .656E+04       31.5         1.19       3.47
        1.47    90.62    .828E+04       45.0         1.35       3.06
        1.65    90.79    .100E+05       60.5         1.50       2.76
        1.82    90.97    .118E+05       77.9         1.64       2.53
        1.99    91.14    .136E+05       97.1         1.77       2.34
        2.17    91.31    .155E+05      118.1         1.90       2.18
        2.34    91.48    .173E+05      140.6         2.02       2.06
        2.51    91.66    .193E+05      164.7         2.13       1.95
        2.68    91.83    .212E+05      190.5         2.23       1.86
        2.86    92.00    .232E+05      218.0         2.33       1.78
        3.03    92.18    .253E+05      242.7         2.39       1.74
        3.20    92.35    .275E+05      262.6         2.37       1.75

                                      <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  383.56    43.82    10.58  200.02       1.46      1.34
   OUTFLOW: ID= 1 ( 60770)  383.56    43.82    10.58  200.02       1.46      1.34

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| CALIB            |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78         11.79
     Dep. Storage     (mm)=       2.00          8.70
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     404.74         43.00
     Mannings n           =      0.015         0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
      hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
    0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
    0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
    0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
    0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
    0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
    0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
    0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
    0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
    0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
    0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
    0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
    1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
    1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
    1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
    1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
    1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
    1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
    1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
    1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
    1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
    1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
    1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
    1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
    2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
    2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
    2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
    2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
    2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
    2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
    2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
    2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
    2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
    2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
    2.833     6.35 | 5.917    13.97 | 9.000    12.70 | 12.08    12.70
    2.917     6.35 | 6.000    13.97 | 9.083    12.70 | 12.17    12.70
    3.000     6.35 | 6.083    13.97 | 9.167    12.70 |
    3.083     6.35 | 6.167    13.97 | 9.250    52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.43
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       7.36 (ii)    19.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.80         1.64          3.443 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25          10.17
     RUNOFF VOLUME    (mm)=     210.34       177.73         194.03
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.84           0.91

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57    3.443    10.17   194.03
     + ID2= 2 ( 60770):   383.56   43.821    10.58   200.02
       ================================================
       ID = 3 ( 50780):   408.13   46.579    10.58   199.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
      hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
    0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
    0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
    0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
    0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
    0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
    0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
    0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
    0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
    0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
    0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
    0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
    1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
    1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
    1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
    1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
    1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
    1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
    1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
    1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
    1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
    1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
    1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
    1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
    2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
    2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
    2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
    2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
    2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
    2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
    2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
    2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
    2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
    2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
    2.833     6.35 | 5.917    13.97 | 9.000    12.70 | 12.08    12.70
    2.917     6.35 | 6.000    13.97 | 9.083    12.70 | 12.17    12.70
    3.000     6.35 | 6.083    13.97 | 9.167    12.70 |
    3.083     6.35 | 6.167    13.97 | 9.250    52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.04
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       5.66 (ii)    18.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.20         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.75         0.41          1.168 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25          10.17
     RUNOFF VOLUME    (mm)=     210.34       183.93         200.51
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.87           0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
      hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
    0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
    0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
    0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
    0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
    0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
    0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
    0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
    0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
    0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
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                0.833    6.35 |  3.917   12.70 |  7.000   23.11 |  10.08   52.83
                0.917    6.35 |  4.000   12.70 |  7.083   23.11 |  10.17   52.83
                1.000    6.35 |  4.083   12.70 |  7.167   23.11 |  10.25   37.85
                1.083    6.35 |  4.167   12.70 |  7.250   12.70 |  10.33   37.85
                1.167    6.35 |  4.250   16.76 |  7.333   12.70 |  10.42   37.85
                1.250    4.32 |  4.333   16.76 |  7.417   12.70 |  10.50   37.85
                1.333    4.32 |  4.417   16.76 |  7.500   12.70 |  10.58   37.85
                1.417    4.32 |  4.500   16.76 |  7.583   12.70 |  10.67   37.85
                1.500    4.32 |  4.583   16.76 |  7.667   12.70 |  10.75   37.85
                1.583    4.32 |  4.667   16.76 |  7.750   12.70 |  10.83   37.85
                1.667    4.32 |  4.750   16.76 |  7.833   12.70 |  10.92   37.85
                1.750    4.32 |  4.833   16.76 |  7.917   12.70 |  11.00   37.85
                1.833    4.32 |  4.917   16.76 |  8.000   12.70 |  11.08   37.85
                1.917    4.32 |  5.000   16.76 |  8.083   12.70 |  11.17   37.85
                2.000    4.32 |  5.083   16.76 |  8.167   12.70 |  11.25   12.70
                2.083    4.32 |  5.167   16.76 |  8.250   12.70 |  11.33   12.70
                2.167    4.32 |  5.250   13.97 |  8.333   12.70 |  11.42   12.70
                2.250    6.35 |  5.333   13.97 |  8.417   12.70 |  11.50   12.70
                2.333    6.35 |  5.417   13.97 |  8.500   12.70 |  11.58   12.70
                2.417    6.35 |  5.500   13.97 |  8.583   12.70 |  11.67   12.70
                2.500    6.35 |  5.583   13.97 |  8.667   12.70 |  11.75   12.70
                2.583    6.35 |  5.667   13.97 |  8.750   12.70 |  11.83   12.70
                2.667    6.35 |  5.750   13.97 |  8.833   12.70 |  11.92   12.70
                2.750    6.35 |  5.833   13.97 |  8.917   12.70 |  12.00   12.70
                2.833    6.35 |  5.917   13.97 |  9.000   12.70 |  12.08   12.70
                2.917    6.35 |  6.000   13.97 |  9.083   12.70 |  12.17   12.70
                3.000    6.35 |  6.083   13.97 |  9.167   12.70 |
                3.083    6.35 |  6.167   13.97 |  9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.33
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.70 (ii)   18.11 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.68         0.07         0.750 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25          10.17
     RUNOFF VOLUME    (mm)=     210.34       178.16         207.18
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.84           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40790):     8.18   1.168    10.17   200.51
     + ID2= 2 ( 40800):     5.15   0.750    10.17   207.18
       ==================================================
       ID = 3 ( 50795):    13.33   1.918    10.17   203.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7780      0.6570
                          0.0040      0.0150   |    1.1550      0.7720
                          0.0090      0.0810   |    1.5780      0.8930
                          0.0120      0.1550   |    1.9240      0.9870
                          0.0140      0.2370   |    2.4190      1.1190
                          0.0160      0.3260   |    2.9510      1.2560
                          0.0620      0.3720   |    3.5980      1.3270
                          0.2560      0.4700   |    4.5570      1.3990
                          0.5310      0.5740   |    5.7230      1.4730

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)   13.332     1.918     10.17     203.09
   OUTFLOW: ID= 1 ( 70180)   13.332     1.447     10.58     203.02
   OVERFLOW:ID= 3 (  0003)    0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 75.44
                  TIME SHIFT OF PEAK FLOW         (min)= 25.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8555

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  --------------------------
  | Junction Command(70181) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

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| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41         2.16
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.50
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.28 (ii)   13.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.23         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.18         0.32          0.502 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     211.34       176.25         188.43
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       1.00         0.83           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40805):     3.57   0.502    10.17   188.43
     + ID2= 2 ( 70180):    13.33   1.447    10.58   203.02
       ==================================================
       ID = 3 ( 50790):    16.90   1.870    10.25   199.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH   70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH    0001 = HYDROGRAPH 0003
       ID1= 3 ( 50790):    16.90   1.870    10.25   199.94
     + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
       ==================================================
       ID = 1 ( 50790):    16.90   1.870    10.25   199.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50780):   408.13  46.579    10.58   199.65
     + ID2= 2 ( 50790):    16.90   1.870    10.25   199.94
       ==================================================
       ID = 3 ( 50800):   425.03  48.413    10.58   199.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         88.54        0.0450
                    3.00         88.18        0.0450
                    6.00         87.54        0.0450
                    9.00         87.44        0.0450
                   12.00         87.13        0.0450
                   15.00         87.23        0.0450
                   18.00         87.18        0.0450
                   21.00         86.49    0.0450 /0.0350  Main Channel
                   24.00         85.82        0.0350      Main Channel
                   27.00         86.44    0.0350 /0.0450  Main Channel
                   30.00         87.18        0.0450
                   33.00         87.16        0.0450
                   36.00         87.25        0.0450
                   39.00         87.46        0.0450
                   42.00         87.70        0.0450
                   45.00         87.80        0.0450
                   48.00         88.00        0.0450
                   49.00         88.12        0.0450
                   50.00         88.23        0.0450
                   52.00         88.59        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)       (min)
         0.12   85.95    .779E+02        0.0         0.37       48.75
         0.25   86.07    .312E+03        0.2         0.59       30.71
         0.37   86.19    .701E+03        0.5         0.77       23.44
         0.49   86.32    .125E+04        1.1         0.94       19.35
         0.62   86.44    .195E+04        1.9         1.09       16.67
         0.77   86.59    .299E+04        3.8         1.36       13.29
         0.92   86.74    .424E+04        6.2         1.59       11.42
         1.07   86.89    .570E+04        9.3         1.77       10.25
         1.22   87.04    .736E+04       13.0         1.92        9.44
         1.37   87.19    .938E+04       16.8         1.94        9.33
         1.52   87.34    .134E+05       22.9         1.86        9.74
         1.66   87.49    .182E+05       31.1         1.86        9.72
         1.81   87.64    .237E+05       41.6         1.91        9.51
         1.96   87.79    .298E+05       53.9         1.96        9.22
         2.11   87.94    .365E+05       68.9         2.05        8.84
         2.26   88.09    .437E+05       86.5         2.15        8.43
         2.41   88.24    .513E+05      106.2         2.25        8.04
         2.56   88.39    .592E+05      128.2         2.36        7.69
         2.71   88.54    .674E+05      152.5         2.46        7.36

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  425.03    48.41   10.58 199.67       1.90       1.94
   OUTFLOW: ID= 1 ( 60800)  425.03    48.07   10.75 199.67       1.89       1.94


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| CALIB            |
| STANDHYD ( 40820)|   Area    (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98        11.23
     Dep. Storage     (mm)=       2.00         9.57
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     307.74        44.00
     Mannings n           =      0.015        0.390

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
```

```
                1.000    6.35 |  4.083   12.70 |  7.167   23.11 | 10.25   37.85
                1.083    6.35 |  4.167   12.70 |  7.250   12.70 | 10.33   37.85
                1.167    6.35 |  4.250   16.76 |  7.333   12.70 | 10.42   37.85
                1.250    4.32 |  4.333   16.76 |  7.417   12.70 | 10.50   37.85
                1.333    4.32 |  4.417   16.76 |  7.500   12.70 | 10.58   37.85
                1.417    4.32 |  4.500   16.76 |  7.583   12.70 | 10.67   37.85
                1.500    4.32 |  4.583   16.76 |  7.667   12.70 | 10.75   37.85
                1.583    4.32 |  4.667   16.76 |  7.750   12.70 | 10.83   37.85
                1.667    4.32 |  4.750   16.76 |  7.833   12.70 | 10.92   37.85
                1.750    4.32 |  4.833   16.76 |  7.917   12.70 | 11.00   37.85
                1.833    4.32 |  4.917   16.76 |  8.000   12.70 | 11.08   37.85
                1.917    4.32 |  5.000   16.76 |  8.083   12.70 | 11.17   37.85
                2.000    4.32 |  5.083   16.76 |  8.167   12.70 | 11.25   12.70
                2.083    4.32 |  5.167   16.76 |  8.250   12.70 | 11.33   12.70
                2.167    4.32 |  5.250   13.97 |  8.333   12.70 | 11.42   12.70
                2.250    6.35 |  5.333   13.97 |  8.417   12.70 | 11.50   12.70
                2.333    6.35 |  5.417   13.97 |  8.500   12.70 | 11.58   12.70
                2.417    6.35 |  5.500   13.97 |  8.583   12.70 | 11.67   12.70
                2.500    6.35 |  5.583   13.97 |  8.667   12.70 | 11.75   12.70
                2.583    6.35 |  5.667   13.97 |  8.750   12.70 | 11.83   12.70
                2.667    6.35 |  5.750   13.97 |  8.833   12.70 | 11.92   12.70
                2.750    6.35 |  5.833   13.97 |  8.917   12.70 | 12.00   12.70
                2.833    6.35 |  5.917   13.97 |  9.000   12.70 | 12.08   12.70
                2.917    6.35 |  6.000   13.97 |  9.083   12.70 | 12.17   12.70
                3.000    6.35 |  6.083   13.97 |  9.167   12.70 |
                3.083    6.35 |  6.167   13.97 |  9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.06
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       5.49 (ii)   17.29 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.20         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.27         1.66          1.935 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       174.17        178.86
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.82          0.84

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  87.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40820):    14.21    1.935    10.17   178.86
      + ID2= 2 ( 60800):   425.03   48.071    10.75   199.67
        ================================================
        ID = 3 ( 50820):   439.24   49.626    10.75   198.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50500):  2034.46 143.572    11.25   119.84
      + ID2= 2 ( 50820):   439.24   49.626    10.75   198.99
        ================================================
        ID = 3 ( 50830):  2473.70 190.971    11.17   133.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         82.12        0.0450
                  20.00         81.53        0.0450
                  24.00         81.26        0.0450
                  28.00         81.27        0.0450
                  32.00         80.34    0.0450 /0.0350  Main Channel
                  36.00         79.95        0.0350      Main Channel
                  40.00         80.78        0.0450
                  44.00         81.45        0.0450
                  48.00         81.53        0.0450
                  52.00         81.49        0.0450
                  56.00         81.51        0.0450
                  60.00         81.58        0.0450
                  64.00         81.58        0.0450
                  68.00         81.61        0.0450
                  72.00         81.75        0.0450
                  80.00         82.07        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.10   80.05    .555E+01        0.0        0.24       5.45
        0.19   80.14    .222E+02        0.1        0.38       3.43
        0.29   80.24    .499E+02        0.3        0.50       2.62
        0.39   80.34    .888E+02        0.7        0.60       2.16
        0.50   80.45    .146E+03        1.4        0.77       1.68
        0.62   80.57    .213E+03        2.5        0.91       1.43
        0.73   80.68    .290E+03        3.8        1.02       1.27
        0.85   80.80    .375E+03        5.4        1.13       1.15
        0.96   80.91    .471E+03        7.6        1.26       1.03
        1.08   81.03    .578E+03       10.1        1.37       0.95
        1.19   81.14    .695E+03       13.0        1.46       0.89
        1.31   81.26    .823E+03       16.2        1.53       0.85
        1.43   81.37    .100E+04       19.7        1.53       0.85
        1.54   81.49    .121E+04       24.1        1.56       0.84
        1.66   81.60    .155E+04       29.0        1.46       0.89
        1.77   81.72    .204E+04       36.4        1.39       0.93
        1.89   81.84    .259E+04       45.6        1.38       0.95
        2.00   81.95    .320E+04       56.7        1.38       0.94
        2.12   82.07    .387E+04       69.6        1.40       0.93

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)     (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 2473.70   190.97   11.17 133.90      2.11      1.40
   OUTFLOW: ID= 1 ( 60830) 2473.70   190.93   11.25 133.90      2.11      1.40


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| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36        15.15
     Dep. Storage     (mm)=       2.00         5.54
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     550.83        40.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        72.67
                   over (min)      10.00        20.00
     Storage Coeff.  (min)=       9.24 (ii)   18.80 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.12         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       3.56         2.89          6.453 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       188.11        199.99
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.89          0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         1.59
     Dep. Storage     (mm)=       2.00         9.61
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     116.69        69.00
     Mannings n           =      0.015        0.370

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.01
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       2.78 (ii)   16.34 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.28         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.04         0.24          0.280 (iii)
     TIME TO PEAK    (hrs)=       9.83        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       174.11        179.34
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.82          0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  87.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51    6.453    10.17   199.99
      + ID2= 2 ( 40840):     2.04    0.280    10.17   179.34
        ================================================
        ID = 3 ( 50840):    47.56    6.733    10.17   199.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56    6.733    10.17   199.10
      + ID2= 2 ( 60830):  2473.70 190.930    11.25   133.90
        ================================================
        ID = 1 ( 50840):  2521.25 195.740    11.17   135.13
```

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      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         82.18         0.0450
                  32.00         79.04         0.0450
                  40.00         78.76         0.0450
                  48.00         78.58         0.0450
                  56.00         78.21         0.0450
                  64.00         76.89         0.0350      Main Channel
                  72.00         78.08         0.0450
                  80.00         79.44         0.0450
                  88.00         80.28         0.0450
                  96.00         80.92         0.0450
                 104.00         81.29         0.0450
                 112.00         81.62         0.0450
                 120.00         81.76         0.0450
                 128.00         81.81         0.0450
                 140.00         82.02         0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.27    77.16    .320E+03       0.2         0.48      24.00
         0.54    77.43    .128E+04       1.4         0.75      15.12
         0.81    77.70    .288E+04       4.2         0.99      11.54
         1.08    77.97    .512E+04       9.0         1.20       9.53
         1.35    78.24    .799E+04      16.6         1.42       8.02
         1.62    78.51    .119E+05      26.9         1.54       7.40
         1.89    78.78    .176E+05      41.0         1.59       7.15
         2.16    79.05    .252E+05      62.9         1.71       6.68
         2.43    79.32    .341E+05      93.9         1.89       6.05
         2.70    79.59    .438E+05     131.1         2.05       5.56
         2.97    79.86    .544E+05     175.1         2.20       5.18
         3.24    80.13    .660E+05     226.4         2.35       4.86
         3.51    80.40    .787E+05     284.9         2.48       4.60
         3.77    80.67    .924E+05     351.1         2.60       4.39
         4.04    80.94    .107E+06     425.7         2.72       4.20
         4.31    81.21    .124E+06     507.1         2.81       4.06
         4.58    81.48    .141E+06     598.4         2.90       3.94
         4.85    81.75    .161E+06     695.9         2.96       3.86
         5.12    82.02    .185E+06     800.9         2.97       3.85

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50840) 2521.25   195.74   11.17 135.13       3.07       2.26
   OUTFLOW: ID= 1 ( 60840) 2521.25   195.32   11.25 135.13       3.07       2.26



--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area     (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14         18.19
     Dep. Storage     (mm)=       2.00          7.29
     Average Slope     (%)=       2.00          2.00
     Length            (m)=     418.93        142.00
     Mannings n           =      0.015         0.310

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.04
                   over (min)       5.00        30.00
     Storage Coeff.  (min)=       6.89 (ii)   28.54 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.18         0.04
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.95         2.46          3.315 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.42         10.17
     RUNOFF VOLUME    (mm)=     210.34       180.42        187.79
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.85          0.88

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33    3.315    10.17   187.79
      + ID2= 2 ( 60840):  2521.25  195.320    11.25   135.13
        ================================================
        ID = 3 ( 50850):  2547.58  197.877    11.25   135.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area     (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77         35.37
     Dep. Storage     (mm)=       2.00          8.79
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     611.77        120.00
     Mannings n           =      0.015         0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.94
                   over (min)      10.00        35.00
     Storage Coeff.  (min)=       9.85 (ii)   33.32 (ii)
     Unit Hyd. Tpeak (min)=      10.00        35.00
     Unit Hyd. peak  (cms)=       0.11         0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       2.79         4.44          6.924 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.50         10.25
     RUNOFF VOLUME    (mm)=     210.34       180.15        190.42
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.85          0.90

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         85.55         0.0450
                  24.00         85.23         0.0450
                  28.00         85.17         0.0450
                  32.00         85.07         0.0450
                  36.00         84.96         0.0350      Main Channel
                  40.00         84.96         0.0350      Main Channel
                  44.00         85.00    0.0350 /0.0450   Main Channel
                  48.00         85.03         0.0450
                  52.00         85.18         0.0450
                  56.00         85.22         0.0450
                  60.00         85.31         0.0450
                  64.00         85.33         0.0450
                  68.00         85.38         0.0450
                  80.00         85.59         0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.01    84.96    .992E+01       0.0         0.05     238.32
         0.04    84.99    .159E+03       0.0         0.21      57.53
         0.07    85.03    .408E+03       0.2         0.32      38.32
         0.10    85.06    .751E+03       0.4         0.40      30.54
         0.13    85.09    .114E+04       0.7         0.47      25.77
         0.16    85.12    .158E+04       1.2         0.53      22.66
         0.19    85.15    .206E+04       1.7         0.59      20.45
         0.22    85.18    .259E+04       2.3         0.64      18.91
         0.25    85.21    .321E+04       3.0         0.67      18.12
         0.29    85.24    .393E+04       3.8         0.70      17.32
         0.32    85.27    .473E+04       4.8         0.73      16.56
         0.35    85.30    .562E+04       5.9         0.76      15.89
         0.38    85.34    .663E+04       7.0         0.77      15.69
         0.41    85.37    .777E+04       8.5         0.80      15.20
         0.44    85.40    .902E+04      10.2         0.82      14.69
         0.47    85.43    .104E+05      12.2         0.85      14.19
         0.50    85.46    .118E+05      14.3         0.88      13.73
         0.53    85.49    .133E+05      16.7         0.91      13.31
         0.56    85.52    .150E+05      19.3         0.94      12.91

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 40880)   56.14     6.92    10.25 190.42       0.38       0.77
   OUTFLOW: ID= 1 ( 60880)   56.14     6.57    10.50 190.39       0.37       0.77



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--------------------
| ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
| DT=  5.0 min     |     Length       (m)= 888.03
--------------------     Slope      (m/m)=  0.004
                         Manning n       =  0.013

      <----------------- TRAVEL TIME TABLE ------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)     (cu.m.)      (cms)        (m/s)        min
         0.10    .213E+03       0.2         0.93        15.91
         0.20    .426E+03       0.7         1.41        10.53
         0.30    .639E+03       1.3         1.76         8.42
         0.40    .853E+03       2.0         2.04         7.25
         0.50    .107E+04       2.7         2.27         6.51
         0.60    .128E+04       3.6         2.47         5.99
         0.70    .149E+04       4.4         2.64         5.60
         0.80    .171E+04       5.4         2.79         5.30
         0.90    .192E+04       6.3         2.92         5.06
         1.00    .213E+04       7.3         3.04         4.87
         1.10    .234E+04       8.3         3.15         4.71
         1.20    .256E+04       9.3         3.24         4.57
         1.30    .277E+04      10.4         3.33         4.45
         1.40    .298E+04      11.4         3.40         4.35
         1.50    .320E+04      12.5         3.48         4.26
         1.60    .341E+04      13.6         3.54         4.18
         1.70    .362E+04      14.7         3.60         4.11
         1.80    .384E+04      15.8         3.66         4.05
         1.90    .405E+04      16.9         3.71         3.99

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 60880)   56.14     6.57    10.50 190.39       0.93       2.95
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   OUTFLOW: ID= 1 ( 80880)   56.14     6.56   10.58 190.39      0.92      2.95

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| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       18.24         23.47
     Dep. Storage     (mm)=        2.00          8.20
     Average Slope     (%)=        1.10          1.10
     Length            (m)=      527.32         85.00
     Mannings n           =       0.015         0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        61.31
               over (min)       10.00        30.00
  Storage Coeff.  (min)=       9.47 (ii)   29.22 (ii)
  Unit Hyd. Tpeak (min)=      10.00        30.00
  Unit Hyd. peak  (cms)=       0.12         0.04
                                                    *TOTALS*
  PEAK FLOW       (cms)=       2.01         3.46        5.319 (iii)
  TIME TO PEAK    (hrs)=      10.17        10.42        10.17
  RUNOFF VOLUME    (mm)=     210.34       180.04       189.99
  TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
  RUNOFF COEFFICIENT   =       0.99         0.85         0.89

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN*  =  88.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        8.41          5.15
     Dep. Storage     (mm)=        1.00          7.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=      300.67         43.00
     Mannings n           =       0.015         0.310

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        71.05
               over (min)        5.00        20.00
  Storage Coeff.  (min)=       6.96 (ii)   16.57 (ii)
  Unit Hyd. Tpeak (min)=       5.00        20.00
  Unit Hyd. peak  (cms)=       0.17         0.06
                                                    *TOTALS*
  PEAK FLOW       (cms)=       0.96         0.98        1.931 (iii)
  TIME TO PEAK    (hrs)=      10.17        10.17        10.17
  RUNOFF VOLUME    (mm)=     211.34       186.57       198.46
  TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
  RUNOFF COEFFICIENT   =       1.00         0.88         0.93

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN*  =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------      (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):  13.56      1.93     10.17  198.46
     ==================================================
     MAJOR SYS.(ID= 2):   2.29      0.97     10.17  198.46
     MINOR SYS.(ID= 3):  11.27      0.96      9.33  198.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)     (hrs)     (mm)
        ID1= 1 ( 40890):    41.71    5.319    10.17   189.99
      + ID2= 2 ( 50850):  2547.58 197.877    11.25   135.67
        ================================================
        ID = 3 ( 50890):  2589.29 202.134    11.25   136.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)     (hrs)     (mm)
        ID1= 3 ( 50890):  2589.29 202.134    11.25   136.55
      + ID2= 2 ( 80880):    56.14    6.560    10.58   190.39
        ================================================
        ID = 1 ( 50890):  2645.43 208.309    11.25   137.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)     (hrs)     (mm)
        ID1= 1 ( 50890):  2645.43 208.309    11.25   137.69
      + ID2= 2 ( 90020):    11.27    0.960     9.33   198.46
        ================================================
        ID = 3 ( 50890):  2656.70 209.269    11.25   137.95

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00          79.05        0.0450
                   2.00          78.40        0.0450
                   4.00          77.75        0.0450
                   6.00          77.16        0.0450
                   8.00          76.78        0.0450
                  10.00          76.65        0.0450
                  12.00          76.60        0.0450
                  14.00          76.58        0.0450
                  16.00          76.08        0.0450
                  18.00          75.49    0.0450 /0.0350  Main Channel
                  20.00          75.46        0.0350      Main Channel
                  22.00          75.52    0.0350 /0.0450  Main Channel
                  24.00          76.15        0.0450
                  26.00          76.44        0.0450
                  28.00          76.56        0.0450
                  30.00          76.68        0.0450
                  32.00          76.86        0.0450
                  34.00          77.01        0.0450
                  36.00          77.10        0.0450
                  40.00          79.16        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.03   75.49    .127E+02        0.0         0.14      32.03
        0.22   75.68    .231E+03        0.6         0.69       6.29
        0.40   75.87    .510E+03        2.0         1.01       4.28
        0.59   76.05    .849E+03        4.1         1.25       3.45
        0.78   76.24    .125E+04        6.9         1.43       3.02
        0.97   76.43    .175E+04       10.6         1.57       2.75
        1.15   76.62    .240E+04       14.6         1.57       2.75
        1.34   76.80    .343E+04       21.1         1.60       2.71
        1.53   76.99    .465E+04       30.1         1.68       2.58
        1.71   77.18    .605E+04       41.3         1.77       2.44
        1.90   77.36    .754E+04       55.7         1.92       2.26
        2.09   77.55    .908E+04       72.1         2.06       2.10
        2.27   77.74    .107E+05       90.6         2.20       1.96
        2.46   77.92    .123E+05      111.1         2.34       1.84
        2.65   78.11    .140E+05      133.5         2.48       1.74
        2.84   78.30    .157E+05      157.9         2.61       1.66
        3.02   78.49    .175E+05      184.1         2.73       1.58
        3.21   78.67    .193E+05      212.1         2.85       1.52
        3.40   78.86    .211E+05      242.1         2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 50890) 2656.70   209.27   11.25 137.95      3.19      2.84
  OUTFLOW: ID= 1 ( 60900) 2656.70   209.29   11.25 137.95      3.19      2.84

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        4.77          2.15
     Dep. Storage     (mm)=        2.00          7.07
     Average Slope     (%)=        1.70          1.70
     Length            (m)=      214.73         44.00
     Mannings n           =       0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
```

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                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        79.25
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.85 (ii)   14.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.54         0.46          1.000 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       190.62         201.05
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.90           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40910):     6.92   1.000    10.17   201.05
     + ID2= 2 ( 60900):  2656.70 209.290    11.25   137.95
       ==========================================================
       ID = 3 ( 50910):  2663.61 209.835    11.25   138.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       1.70         1.00
     Length            (m)=      78.30         0.00
     Mannings n           =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.43 (ii)    2.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.30         0.30
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.85         0.01          0.858 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       190.35         210.14
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.90           0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     5.85   0.858    10.17   210.14
     + ID2= 2 (******):     4.07   1.701    10.42   196.89
       ==========================================================
       ID = 3 (******):     9.92   2.316    10.42   204.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.00   0.000    10.17   206.28
     + ID2= 2 (******):    10.30   2.083    10.42   196.89
       ==========================================================
       ID = 3 (******):    10.30   2.083    10.42   196.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    10.30   2.083    10.42   196.89
     + ID2= 2 (******):     9.92   2.316    10.42   204.70
       ==========================================================
       ID = 1 (******):    20.22   4.400    10.42   200.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         426.51        0.0450
                   0.98         426.14        0.0350      Main Channel
                   2.04         426.14        0.0350      Main Channel
                  20.51         426.51        0.0350      Main Channel

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)    (cu.m.)       (cms)        (m/s)       (min)
         0.00   426.14    .579E+00         0.0         0.03      191.52
         0.02   426.16    .114E+02         0.0         0.14       39.52
         0.04   426.18    .285E+02         0.0         0.19       27.56
         0.06   426.20    .520E+02         0.0         0.24       22.17
         0.08   426.22    .818E+02         0.1         0.28       18.92
         0.10   426.24    .118E+03         0.1         0.32       16.68
         0.12   426.26    .161E+03         0.2         0.36       15.02
         0.14   426.27    .210E+03         0.3         0.39       13.73
         0.16   426.29    .265E+03         0.3         0.42       12.69
         0.18   426.31    .326E+03         0.5         0.45       11.82
         0.20   426.33    .394E+03         0.6         0.48       11.10
         0.22   426.35    .469E+03         0.7         0.51       10.47
         0.24   426.37    .549E+03         0.9         0.54        9.93
         0.26   426.39    .637E+03         1.1         0.56        9.46
         0.28   426.41    .730E+03         1.3         0.59        9.03
         0.30   426.43    .830E+03         1.6         0.62        8.65
         0.32   426.45    .936E+03         1.9         0.64        8.31
         0.34   426.47    .105E+04         2.2         0.67        8.01
         0.35   426.49    .117E+04         2.5         0.69        7.72

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)    20.22     4.40   10.42 200.72      0.35      0.68
   OUTFLOW: ID= 1 (******)    20.22     4.29   10.67 200.72      0.35      0.69


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| ROUTEPIPE(******)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Diameter    (mm)=1650.00
| DT=  5.0 min     |     Length       (m)= 500.00
--------------------     Slope      (m/m)=  0.005
                         Manning n        =  0.013

      <----------------- TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)      (cu.m.)      (cms)        (m/s)        min
         0.09     .216E+02         0.0         0.80        10.40
         0.17     .600E+02         0.1         1.25         6.67
         0.26     .108E+03         0.3         1.61         5.18
         0.35     .164E+03         0.6         1.91         4.36
         0.43     .225E+03         1.0         2.18         3.83
         0.52     .290E+03         1.4         2.41         3.46
         0.61     .358E+03         1.9         2.61         3.19
         0.69     .428E+03         2.4         2.79         2.99
         0.78     .499E+03         2.9         2.95         2.83
         0.87     .570E+03         3.5         3.08         2.70
         0.96     .642E+03         4.1         3.20         2.61
         1.04     .712E+03         4.7         3.29         2.53
         1.13     .780E+03         5.2         3.36         2.48
         1.22     .844E+03         5.8         3.41         2.44
         1.30     .905E+03         6.2         3.44         2.43
         1.39     .961E+03         6.6         3.43         2.43
         1.48     .101E+04         6.9         3.40         2.45
         1.56     .105E+04         6.9         3.31         2.52
         1.65     .107E+04         6.5         3.02         2.76
                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)     4.11     0.60   10.17 206.28      0.34      1.88
   OUTFLOW: ID= 1 (******)     4.11     0.60   10.17 206.28      0.34      1.87


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.33   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.070

     PEAK FLOW       (cms)=   0.048 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.805
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.894

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| NASHYD   (******)|   Area     (ha)=   7.90   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.25

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   1.207

     PEAK FLOW       (cms)=   1.132 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.201
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.33   0.048    10.17   189.81
     + ID2= 2 (******):     7.90   1.132    10.17   190.20
       ================================================
       ID = 3 (******):     8.23   1.180    10.17   190.19

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.19   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.15

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.027 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.253
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.891

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.44   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.19

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.063 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.909
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.894

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=  17.88   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.36

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   1.897

     PEAK FLOW       (cms)=   2.459 (i)
     TIME TO PEAK    (hrs)=  10.250
     RUNOFF VOLUME    (mm)= 190.316
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    17.88   2.459    10.25   190.32
     + ID2= 2 (******):     0.44   0.063    10.17   189.91
       ================================================
       ID = 3 (******):    18.32   2.520    10.25   190.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.19   0.027    10.17   189.25
     + ID2= 2 (******):    18.32   2.520    10.25   190.31
       ================================================
       ID = 3 (******):    18.51   2.546    10.25   190.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    18.51   2.546    10.25   190.30
     + ID2= 2 (******):     8.23   1.180    10.17   190.19
       ================================================
       ID = 1 (******):    26.74   3.711    10.17   190.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

---------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     4.11   0.601    10.17   206.28
     + ID2= 2 (******):    26.74   3.711    10.17   190.26
       ================================================
       ID = 3 (******):    30.85   4.312    10.17   192.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    30.85   4.312    10.17   192.40
      + ID2= 2 (******):    20.22   4.285    10.67   200.72
        ================================================
        ID = 1 (******):    51.07   8.026    10.50   195.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        418.26        0.0450
                  40.58        417.27        0.0450
                  68.64        416.80        0.0450
                 140.74        415.56        0.0450
                 163.74        415.03    0.0450 /0.0350  Main Channel
                 211.93        413.30        0.0350      Main Channel
                 250.43        411.92        0.0350      Main Channel
                 258.86        411.77        0.0350      Main Channel
                 276.07        411.80        0.0350      Main Channel
                 290.03        411.70        0.0350      Main Channel
                 294.99        411.74        0.0350      Main Channel
                 298.74        411.97        0.0350      Main Channel
                 309.80        412.64        0.0350      Main Channel
                 321.40        413.39        0.0350      Main Channel
                 332.67        415.03    0.0350 /0.0450  Main Channel
                 344.47        416.63        0.0450
                 360.44        418.31        0.0450
                 381.73        419.43        0.0450
                 385.80        419.95        0.0450
                 389.30        420.75        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.33  412.03    .115E+05      14.5         1.18      13.21
        0.67  412.36    .302E+05      61.5         1.91       8.18
        1.00  412.70    .535E+05     139.9         2.46       6.38
        1.33  413.03    .814E+05     252.5         2.91       5.37
        1.66  413.36    .114E+06     402.0         3.32       4.72
        2.00  413.70    .150E+06     597.3         3.74       4.19
        2.33  414.03    .190E+06     834.3         4.12       3.80
        2.66  414.36    .234E+06    1114.3         4.47       3.50
        2.99  414.69    .281E+06    1439.4         4.80       3.26
        3.33  415.03    .332E+06    1811.8         5.12       3.06
        3.69  415.39    .393E+06    2361.5         5.65       2.77
        4.05  415.75    .459E+06    2978.2         6.10       2.57
        4.41  416.10    .533E+06    3668.2         6.46       2.42
        4.76  416.46    .615E+06    4437.5         6.78       2.31
        5.12  416.82    .705E+06    5290.7         7.05       2.22
        5.48  417.18    .804E+06    6232.2         7.29       2.15
        5.84  417.54    .910E+06    7276.0         7.51       2.08
        6.20  417.90    .102E+07    8417.1         7.74       2.02
        6.56  418.26    .114E+07    9654.5         7.95       1.97

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   51.07     8.03   10.50 195.69      0.18      1.18
   OUTFLOW: ID= 1 (******)   51.07     7.79   10.67 195.69      0.18      1.18


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   3.858 (i)
     TIME TO PEAK    (hrs)=  10.500
     RUNOFF VOLUME    (mm)= 190.346
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    31.02   3.858    10.50   190.35
      + ID2= 2 (******):    51.07   7.787    10.67   195.69
        ================================================
        ID = 3 (******):    82.09  11.594    10.67   193.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 FINISH
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Appendix C

Preliminary SWM Facility Design

Project: Bronte Creek Meadows
Project Number: 45174-124
Location: City of Burlington
Owner: The Alinea Group
Date: 8/16/2025
Designed by: CKM
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Pre

SWM Facility Sizing (Proposed)

SWMF1 (West Pond)

Contributing Land Areas - All

Catchment	Area (ha)	% Impervious	A*I	
EXT-4	1.05	0%	0	External
306	2.99	23%	0.69	Internal
305+307+308+401+Phase 2	34.95	72%	25.160	Internal
Total	38.99	66.3%	25.85	

Contributing Land Areas - Internal

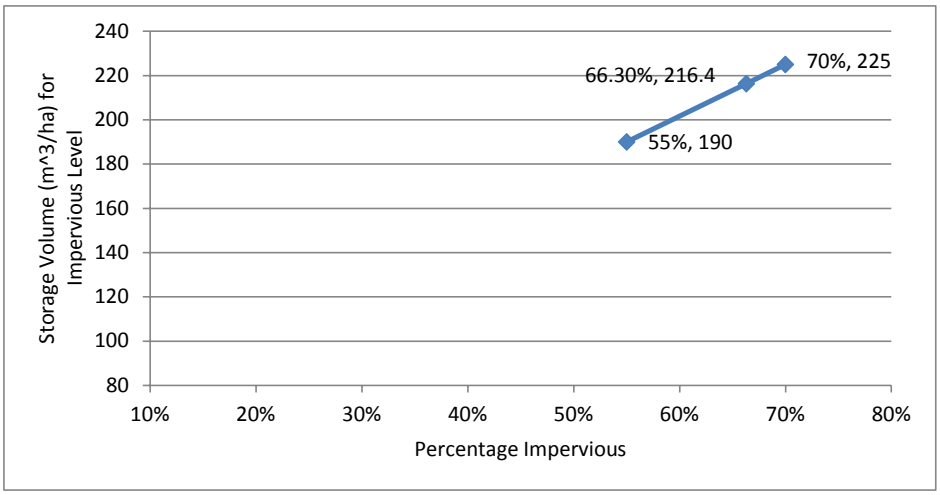
Catchment	Area (ha)	% Impervious	A*I	
306	2.99	23%	0.69	Internal
305+307+308+401+Phase 2	34.95	0.72	25.1604	Internal
Total	37.94	68.1%	25.85	

MOE Table 3.2 Water Quality Storage Requirements based on Receiving Waters

Protection Level	SWMP Type	Storage Volume (m^3/ha) for Impervious Level			
		35%	**55%**	**70%**	**85%**
Enhanced 80% long-term S.S. removal	Infiltration	25	30	35	40
	Wetlands	80	105	120	140
	Hybrid Wet Pond/Wetland	110	150	175	195
	Wet Pond	140	190	225	250
Normal 70% long term S.S. removal	Infiltration	20	20	25	30
	Wetlands	60	70	80	90
	Hybrid Wet Pond/Wetland	75	90	105	120
	Wet Pond	90	110	130	150
Basic 60% long-term S.S. removal	Infiltration	20	20	20	20
	Wetlands	60	60	60	60
	Hybrid Wet Pond/Wetland	60	70	75	80
	Wet Pond	60	75	85	95
	Dry Pond (Continuous Flow)	90	150	200	240

Wet Pond

Total Contributing Area = 38.99 ha
Percentage Impervious = 66.30%
Protection Level = Enhanced



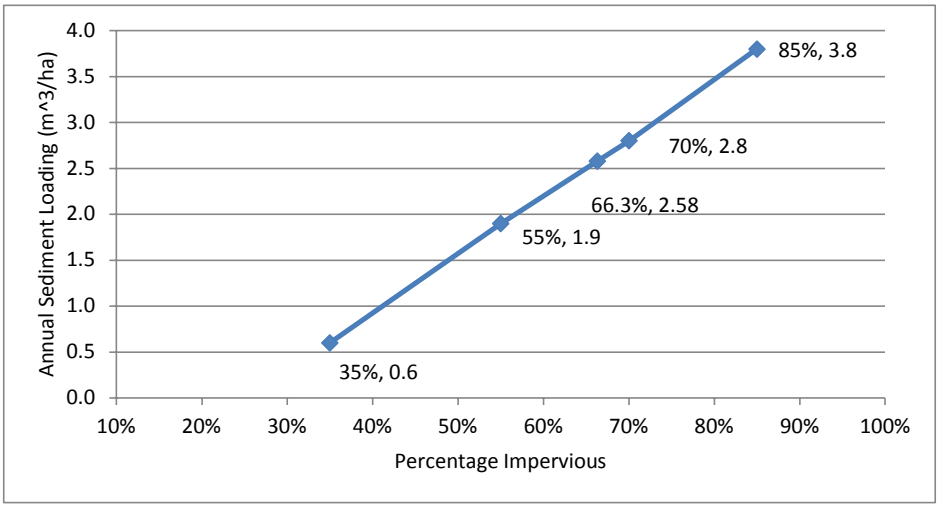
Required Storage Volume =	**216.4 m^3/ha**	**8436 m^3**
Extended Detention =	**40 m^3/ha =**	**1560 m^3**
Permanent Pool =	**176.4 m^3/ha =**	**6876 m^3**

POND CLEANOUT FREQUENCY

Annual Sediment Loadings - MOE Table 6.3

Catchment Imperviousness	Annual Loading (m^3/ha)
35%	0.6
55%	1.9
66.3%	2.58
70%	2.8
85%	3.8

Average Catchment Impervious	66.30%
Total WQ Catchment Area	38.99 ha



Annual Loading	2.58 m^3/ha/year
	100.5 m^3/year
Forebay Volume to 50% (1m) Depth	1543.0 m^3
Clean-out Frequency	**15.4** years

SWMF1 Sediment Forebay Volume

Elevation (m)	Stage (m)	Area (m^2)	Inc. Vol. (m^3)	Cum. Vol (m^3)	Notes
129.20	0.00	1175.7	0.0	0.0	Bottom
129.30	0.10	1249.2	121.2	121.2	
129.40	0.20	1322.7	128.6	249.8	
129.50	0.30	1396.1	135.9	385.8	
129.60	0.40	1469.6	143.3	529.1	
129.70	0.50	1543.0	150.6	679.7	
129.80	0.60	1616.5	158.0	837.7	
129.90	0.70	1690.0	165.3	1003.0	
130.00	0.80	1763.4	172.7	1175.7	
130.10	0.90	1836.9	180.0	1355.7	
130.20	1.00	1910.4	187.4	1543.0	Cleanout Point
130.30	1.10	1983.8	194.7	1737.8	
130.40	1.20	2057.3	202.1	1939.8	
130.50	1.30	2130.8	209.4	2149.2	
130.60	1.40	2204.2	216.7	2366.0	
130.70	1.50	2277.7	224.1	2590.1	
130.80	1.60	2351.1	231.4	2821.5	
130.90	1.70	2424.6	238.8	3060.3	
131.00	1.80	2498.1	246.1	3306.4	
131.10	1.90	2571.5	253.5	3559.9	
131.20	2.00	2645.0	260.8	3820.7	PWL

Project:	Bronte Creek Meadows
Project Number:	45174-124
Location:	City of Burlington
Owner:	The Alinea Group
Date:	8/16/2025
Designed by:	CKM
File:	Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Pre

SWM Facility Sizing (Proposed)

SEDIMENT FOREBAY SIZING - WEST POND

Based on MOEE SWM Planning & Design Manual (2003)

Length Based on Settling Velocity

$$L = \sqrt{\frac{r\,Q_p}{v_s}}$$

L = 26.75 m

r : 1 = length to width ratio — r = 2.9
Q_p = peak SWM outflow during quality storm — Q_p = 0.074
v_s = settling velocity for 0.15 mm particles (m/s) — v_s = 0.0003

Dispersion Length

$$L_D = \frac{8Q}{d\,v_f}$$

L_D = 52.48 m

Q = Inlet pipe to SWM facility - 2400x12200mm Box at 0.4% (m^3/s) — Q = 6.56
d = depth of perm pool in forebay (m) — d = 2.0
v_f = desired velocity in forebay (m/s) — v_f = 0.5

Check Scour Velocity

v = Q/A
v = **0.12 m/s**

b = bottom width (avg) of forebay (m) — b = 21
Q = inlet flow (m^3/s) — Q = 6.56
A = cross-sectional area (m^2) — A = 57.0
Target velocity = 0.15 m/s — V_{targ} = 0.15

Therefore, **Velocity Target Satisfied**

Required Forebay Length = 52.48 m

Forebay Length Provided = 60 m

Bronte Creek Meadows
PRELIMINARY POND DESIGN - SWMF1 (WEST POND)
Burlington, Ontario

Project Number: 52982-104
Date: February 13, 2026
File: Q:\52982\104\SWM\52982-104 SSD - SWMF1 West Pond.xlsm

Orifice Calculations

$Q_o=C_d*A_o*(2*g*H_o)^{0.5}$

	Orifice 1	Orifice 2	Orifice 3
C_d	0.63	0.63	0.63
Invert (m)	131.2	131.5	131.2
Width (m)	0.00	0.00	0.00
Diameter/Height (m)	0.345	0.150	0.400
Type (H/V)	V	V	V

Cd	Description
0.63	Orifice Plate
0.82	Eccentric Reducer

STAGE-DISCHARGE RELATIONSHIP

		To POI-21			To POI-21			To POI-21				
Stage	Active Volume	Orifice 1			Orifice 2			Orifice 3			Total Flow	
		Area	H_o	Flow	Area	H_o	Flow	Area	H_o	Flow		
m	m^3	m^2	*m*	m^3/s	m^2	*m*	m^3/s	m^2	*m*	m^3/s	m^3/s	
131.20	0	0.00	0.00	0.0000	0.00	0.00	0.0000	0.00	0.00	0.0000	0.0000	PWL; O1 inv., O3 inv.
131.30	1867	0.02	0.05	0.0140	0.00	0.00	0.0000	0.02	0.05	0.0000	0.0140	
131.40	3763	0.06	0.10	0.0496	0.00	0.00	0.0000	0.06	0.10	0.0000	0.0496	
131.50	5687	0.09	0.15	0.0933	0.00	0.00	0.0000	0.10	0.15	0.0000	0.0933	Orifice 2 invert
131.60	7640	0.09	0.23	0.1244	0.01	0.05	0.0078	0.13	0.20	0.0000	0.1322	
131.70	9623	0.09	0.33	0.1493	0.02	0.12	0.0174	0.13	0.30	0.0000	0.1667	
131.80	11636	0.09	0.43	0.1706	0.02	0.22	0.0234	0.13	0.40	0.0000	0.1940	
131.90	13679	0.09	0.53	0.1895	0.02	0.32	0.0281	0.13	0.50	0.0000	0.2176	
132.00	15752	0.09	0.63	0.2066	0.02	0.42	0.0321	0.13	0.60	0.0000	0.2388	
132.10	17854	0.09	0.73	0.2225	0.02	0.52	0.0357	0.13	0.70	0.0000	0.2582	
132.20	19987	0.09	0.83	0.2373	0.02	0.62	0.0390	0.13	0.80	0.0000	0.2763	
132.30	22150	0.09	0.93	0.2512	0.02	0.72	0.0420	0.13	0.90	0.0000	0.2932	
132.40	24344	0.09	1.03	0.2644	0.02	0.82	0.0448	0.13	1.00	0.0000	0.3092	
132.50	26568	0.09	1.13	0.2770	0.02	0.92	0.0474	0.13	1.10	0.0000	0.3244	100-yr Storm
132.60	28824	0.09	1.23	0.0000	0.02	1.02	0.0000	0.13	1.20	0.3841	0.3841	
132.70	31110	0.09	1.33	0.0000	0.02	1.12	0.0000	0.13	1.30	0.3998	0.3998	
132.80	33428	0.09	1.43	0.0000	0.02	1.22	0.0000	0.13	1.40	0.4149	0.4149	
132.90	35777	0.09	1.53	0.0000	0.02	1.32	0.0000	0.13	1.50	0.4295	0.4295	
133.00	38158	0.09	1.63	0.0000	0.02	1.42	0.0000	0.13	1.60	0.4436	0.4436	
133.10	40571	0.09	1.73	0.0000	0.02	1.52	0.0000	0.13	1.70	0.4572	0.4572	
133.20	43015	0.09	1.83	0.0000	0.02	1.62	0.0000	0.13	1.80	0.4705	0.4705	
133.30	45492	0.09	1.93	0.0000	0.02	1.72	0.0000	0.13	1.90	0.4834	0.4834	
133.40	48001	0.09	2.03	0.0000	0.02	1.82	0.0000	0.13	2.00	0.4959	0.4959	
133.50	50543	0.09	2.13	0.0000	0.02	1.92	0.0000	0.13	2.10	0.5082	0.5082	Maximum Ponding
133.60	53084	0.09	2.23	0.0000	0.02	2.02	0.0000	0.13	2.20	0.5201	0.5201	
133.70	55626	0.09	2.33	0.0000	0.02	2.12	0.0000	0.13	2.30	0.5318	0.5318	Top of Freeboard

Project: Bronte Creek Meadows
Project Number: 45174-124
Location: City of Burlington
Owner: The Alinea Group
Date: 8/16/2025
Designed by: CKM
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Pre

SWM Facility Sizing

DETENTION TIME CALCULATION FOR EXTENDED DETENTION VOLUME

SWMF1 (West Pond)

Pond drawdown time can be estimated using Equation 4.10
(MOEE SWMP Planning & Design Manual)

$$t = \frac{2A_p}{CA_o(2g)^{0.5}}(h_1^{0.5} - h_2^{0.5})$$

t = drawdown time in seconds	=	to be calculated	
Ap = surface area of the pond (m^2)	=	**18679**	(Avg. Surface Area between h_1 & h_2)
C = discharge coefficient	=	0.63	
D = diameter of controlling orifice (m)	=	**0.320**	
Ao = cross-sectional area of orifice (m^2)	=	0.08042	
g = acceleration due to gravity (m/s^2)	=	9.81	
Orifice invert elevation (m)	=	***131.200***	(Permanent Pool Elev.)
Orifice centreline elevation (m)	=	***131.360***	
Extended detention elevation (m)	=	***132.380***	
h_1 = starting water level above orifice (m)	=	1.0200	
h_2 = ending water level above orifice (m)	=	0.00	

t = 168114 seconds = 46.7 hours

Note: The 320mm dia. Orifice is not part of current SWM design and will be included during detailed design stage.

Project: Bronte Creek Meadows
Project Number: 45174-124
Location: City of Burlington
Owner: The Alinea Group
Date: 8/16/2025
Designed by: CKM
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Pre

SWM Facility Sizing (Proposed)

SWMF2

Contributing Land Areas - All

Catchment	Area (ha)	% Impervious	A*I	
135	0.71	0%	0	External
307A	0.29	0%	0	External
EXT-23	0.8	0%	0	External
136	1.92	0%	0	External
138	1.01	0%	0	External
139	2.16	0%	0	External
140	2.22	0%	0	External
141	1.03	0%	0	External
142	0.61	0%	0	External
143	0.26	0%	0	External
144	0.54	0%	0	External
116	1.28	0%	0	External
311	1.19	100%	1.19	Internal
309	8.29	100%	8.29	Internal
Total	22.31	42.5%	9.48	

Contributing Land Areas - Internal

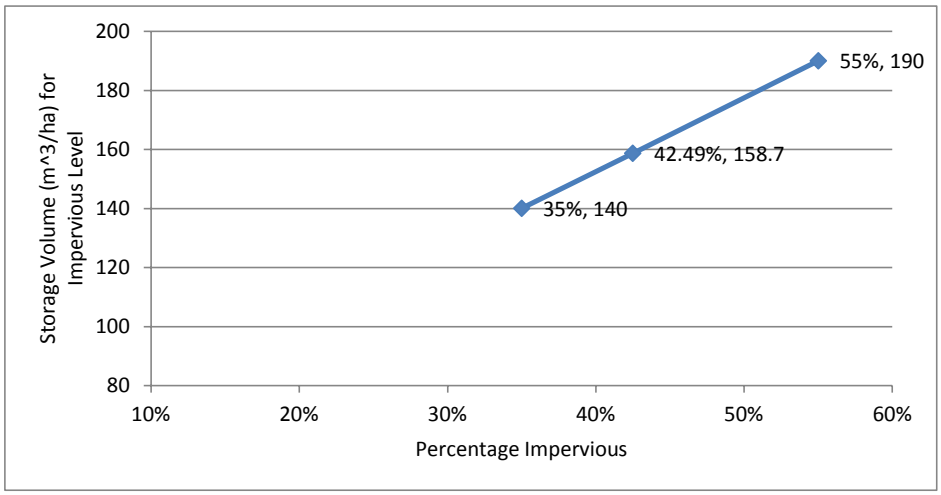
Catchment	Area (ha)	% Impervious	A*I	
116	1.28	0	0	Internal
311	1.19	100	1.19	Internal
309	8.29	100	8.29	Internal
Total	10.76	88.1%	9.48	

MOE Table 3.2 Water Quality Storage Requirements based on Receiving Waters

Protection Level	SWMP Type	Storage Volume (m^3/ha) for Impervious Level			
		35%	55%	70%	85%
Enhanced 80% long-term S.S. removal	Infiltration	25	30	35	40
	Wetlands	80	105	120	140
	Hybrid Wet Pond/Wetland	110	150	175	195
	Wet Pond	140	190	225	250
Normal 70% long term S.S. removal	Infiltration	20	20	25	30
	Wetlands	60	70	80	90
	Hybrid Wet Pond/Wetland	75	90	105	120
	Wet Pond	90	110	130	150
Basic 60% long-term S.S. removal	Infiltration	20	20	20	20
	Wetlands	60	60	60	60
	Hybrid Wet Pond/Wetland	60	70	75	80
	Wet Pond	60	75	85	95
	Dry Pond (Continuous Flow)	90	150	200	240

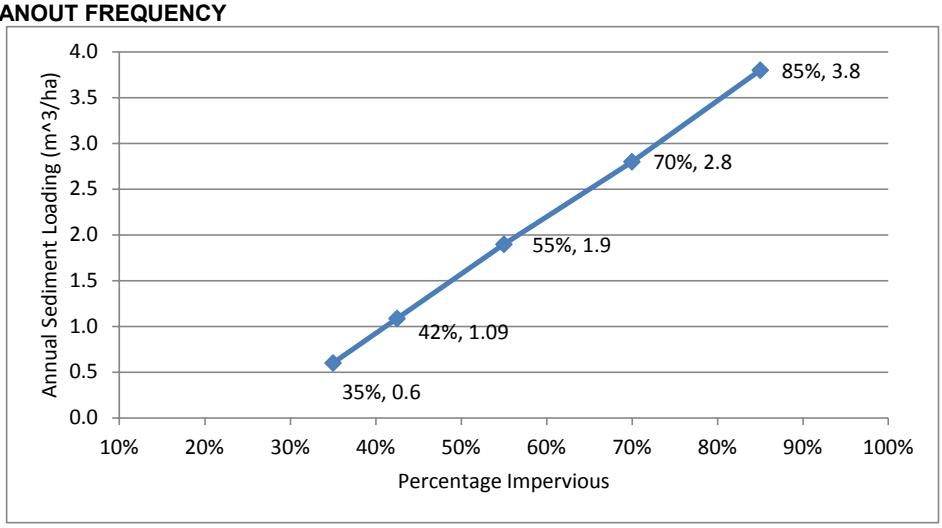
Wet Pond

Total Contributing Area = 22.31 ha
Percentage Impervious = 42.49%
Protection Level = Enhanced



Required Storage Volume =	**158.7 m^3/ha**	**3541 m^3**
Extended Detention =	**40 m^3/ha =**	**892 m^3**
Permanent Pool =	**118.7 m^3/ha =**	**2649 m^3**

POND CLEANOUT FREQUENCY



Boundary conditions:	Upper %IMP =	55%
	Lower %IMP =	35%
	Upper Loading =	1.9
	Lower Loading =	0.6

y=mx+b	
m =	6.5
b =	-1.675
35%	0.6
42.49%	**1.087**
55%	1.9

Annual Loading	1.09 m^3/ha/year
	24.3 m^3/year
Forebay Volume to 50% (1.0m) Depth	431.0 m^3
Clean-out Frequency	**17.8** years

SWMF1 Sediment Forebay Volume

Elevation (m)	Stage (m)	Area (m^2)	Inc. Vol. (m^3)	Cum. Vol (m^3)	Notes
125.00	0.00	227.3	0.0	0.0	Bottom
125.10	0.10	262.3	24.5	24.5	
125.20	0.20	299.4	28.1	52.6	
125.30	0.30	338.4	31.9	84.5	
125.40	0.40	379.0	35.9	120.4	
125.50	0.50	422.5	40.5	160.9	
125.60	0.60	467.2	44.5	205.4	
125.70	0.70	513.9	49.1	254.5	
125.80	0.80	562.4	53.8	308.3	
125.90	0.90	612.9	58.8	367.1	
126.00	1.00	665.3	63.9	431.0	Cleanout Point
126.10	1.10	719.6	69.2	500.2	
126.20	1.20	775.8	74.8	575.0	
126.30	1.30	833.9	80.5	655.5	
126.40	1.40	894.0	86.4	741.9	
126.50	1.50	956.0	92.5	834.4	PWL

Project: Bronte Creek Meadows
Project Number: 45174-124
Location: City of Burlington
Owner: The Alinea Group
Date: 8/16/2025
Designed by: CKM
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Pre

SWM Facility Sizing (Proposed)

SEDIMENT FOREBAY SIZING - SWMF2

Based on MOEE SWM Planning & Design Manual (2003)

Length Based on Settling Velocity

$$L = \sqrt{\frac{r\,Q_p}{v_s}}$$

L = 24.54 m

r : 1 = length to width ratio — r = 2.1
Q_p = peak SWM outflow during quality storm — Q_p = 0.086
v_s = settling velocity for 0.15 mm particles (m/s) — v_s = 0.0003

Dispersion Length

$$L_D = \frac{8\,Q}{d\,v_f}$$

L_D = 24.32 m

Q = Inlet pipe to SWM facility - 1050mm pipe at 0.7% (m^3/s) — Q = 2.28
d = depth of perm pool in forebay (m) — d = 1.5
v_f = desired velocity in forebay (m/s) — v_f = 0.5

Check Scour Velocity

v = Q/A
v = **0.09 m/s**

b = bottom width (avg) of forebay (m) — b = 11.1
Q = inlet flow (m^3/s) — Q = 2.28
A = cross-sectional area (m^2) — A = 25.1
Target velocity = 0.15 m/s — V_{targ} = 0.15

Therefore, **Velocity Target Satisfied**

Required Forebay Length = 24.54 m

Forebay Length Provided = 25 m

BRONTE CREEK MEADOWS SSWS

STAGE-STORAGE DISCHARGE - SWMF2 - Mainway @ Sheldon Creek (West Branch)

Burlington, Ontario

Project Number: 52982-104
Date: February 13, 2026
File: Q:\52982\104\SWM\52982-104 SSD - SWMF2.xlsm

Orifice Calculations

$Q_o = C_d * A_o * (2 * g * H_o)^{0.5}$

	Orifice 1	Orifice 2
C_d	0.63	0.63
Invert (m)	126.50	127.60
Width (m)	0.00	0.00
Diameter/Height (m)	0.230	0.680
Type (H/V)	V	V

Cd	Description
0.63	Orifice Plate
0.82	Eccentric Reducer

Weir Calculations

$Q_w = 2/3 * C_d * (2g)^{1/2} * L * H_w^{3/2} + 8/15 * C_d * (2g)^{1/2} * \tan\theta * H_w^{5/2}$

Cw	0.50
Invert (m)	129.20
Length (m)	4.2
Side Slope (H:V)	0.01
Side Slope (rad)	0.010

STAGE-DISCHARGE RELATIONSHIP - PROPOSED

		To POI-15			To POI-15				
		Orifice 1			Orifice 2				
Stage	Active Volume	Area	H_o	Flow	Area	H_o	Flow	Weir Flow	Total Flow
m	m^3	m^2	m	m^3/s	m^2	m	m^3/s	m^3/s	m^3/s
126.50	0	0.000	0.00	0.0000	0.00	0.00	0.0000	0.0000	0.0000
126.60	394	0.017	0.05	0.0108	0.00	0.00	0.0000	0.0000	0.0108
126.70	804	0.038	0.10	0.0338	0.00	0.00	0.0000	0.0000	0.0338
126.80	1231	0.042	0.19	0.0499	0.00	0.00	0.0000	0.0000	0.0499
126.90	1675	0.042	0.29	0.0619	0.00	0.00	0.0000	0.0000	0.0619
127.00	2135	0.042	0.39	0.0719	0.00	0.00	0.0000	0.0000	0.0719
127.10	2612	0.042	0.49	0.0807	0.00	0.00	0.0000	0.0000	0.0807
127.20	3106	0.042	0.59	0.0887	0.00	0.00	0.0000	0.0000	0.0887
127.30	3616	0.042	0.69	0.0960	0.00	0.00	0.0000	0.0000	0.0960
127.40	4143	0.042	0.79	0.1027	0.00	0.00	0.0000	0.0000	0.1027
127.50	4687	0.042	0.89	0.1091	0.00	0.00	0.0000	0.0000	0.1091
127.60	5247	0.042	0.99	0.1151	0.00	0.00	0.0000	0.0000	0.1151
127.70	5824	0.042	1.09	0.1208	0.03	0.05	0.0207	0.0000	0.1415
127.80	6418	0.042	1.19	0.1262	0.09	0.10	0.0787	0.0000	0.2049
127.90	7028	0.042	1.29	0.1314	0.15	0.15	0.1669	0.0000	0.2984
128.00	7655	0.042	1.39	0.1364	0.22	0.20	0.2773	0.0000	0.4137
128.10	8299	0.042	1.49	0.1413	0.29	0.25	0.3994	0.0000	0.5407
128.20	8959	0.042	1.59	0.1460	0.34	0.30	0.5184	0.0000	0.6644
128.30	9636	0.04	1.69	0.1505	0.36	0.36	0.6081	0.0000	0.7586
128.40	10330	0.04	1.79	0.1549	0.36	0.46	0.6874	0.0000	0.8423
128.50	11040	0.04	1.89	0.1592	0.36	0.56	0.7584	0.0000	0.9176
128.60	11767	0.04	1.99	0.1633	0.36	0.66	0.8233	0.0000	0.9867
128.70	12511	0.04	2.09	0.1674	0.36	0.76	0.8835	0.0000	1.0509
128.80	13271	0.04	2.19	0.1714	0.36	0.86	0.9398	0.0000	1.1112
128.90	14048	0.04	2.29	0.1753	0.36	0.96	0.9930	0.0000	1.1682
129.00	14841	0.04	2.39	0.1791	0.36	1.06	1.0434	0.0000	1.2225
129.10	15652	0.04	2.49	0.1828	0.36	1.16	1.0915	0.0000	1.2743
129.20	16479	0.04	2.59	0.1864	0.36	1.26	1.1376	0.0000	1.3240
129.30	17322	0.04	2.69	0.1900	0.36	1.36	1.1819	0.1962	1.5681
129.40	18182	0.04	2.79	0.1935	0.36	1.46	1.2246	0.5550	1.9730
129.50	19059	0.04	2.89	0.1969	0.36	1.56	1.2658	1.0197	2.4824

Project: Bronte Creek Meadows
Project Number: 45174-124
Location: City of Burlington
Owner: The Alinea Group
Date: 8/16/2024
Designed by: RSM
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Pre

SWM Facility Sizing

DETENTION TIME CALCULATION FOR EXTENDED DETENTION VOLUME
SWMF2

Pond drawdown time can be estimated using Equation 4.10
(MOEE SWMP Planning & Design Manual)

$$t = \frac{2A_p}{CA_o(2g)^{0.5}}(h_1^{0.5} - h_2^{0.5})$$

t = drawdown time in seconds	=	to be calculated	
Ap = surface area of the pond (m^2)	=	**3980**	(Avg. Surface Area between h_1 & h_2)
C = discharge coefficient	=	0.63	
D = diameter of controlling orifice (m)	=	**0.130**	
Ao = cross-sectional area of orifice (m^2)	=	0.01327	
g = acceleration due to gravity (m/s^2)	=	9.81	
Orifice invert elevation (m)	=	***126.500***	(Permanent Pool Elev.)
Orifice centreline elevation (m)	=	***126.565***	
Extended detention elevation (m)	=	***127.170***	
h_1 = starting water level above orifice (m)	=	0.6050	
h_2 = ending water level above orifice (m)	=	0.00	

t = 167157 seconds = 46.4 hours

Note: The 130mm dia. Orifice is not part of current SWM design and will be included during detailed design stage.

Appendix D

Post-Development Hydrology

Project: Bronte Creek Meadows
Project Number: 45174-124
Location: City of Burlington
Owner: The Alinea Group
Date: 2/13/2026
Designed by: DXP
File: Q:\52982\104\SWM\[52982-104-SWM Analysis - Prelim.xls]Param - Interim PH1

PRELIMINARY STORMWATER MANAGEMENT

INTERIM PHASE 1 DEVELOPMENT CONDITIONS HYDROLOGIC MODELING PARAMETERS

Catchment ID	Catchment Description	Hydrograph Method	Area (ha.)	Perv. CN	Perv. Ia (mm)	Impervious (%)		Runoff Coefficient	Flow Length (m)		Manning "n"		Slope (%)		Time to Peak	Development Condition
						TIMP (total)	XIMP (directly connected)		Perv.	Imperv.	Perv.	Imperv.	Perv.	Imperv.	Tp (hrs)	
DISCHARGING DIRECTLY TO SHELDON CREEK WEST BRANCH																
EXT-24	Ploughed field draining to Sheldon Creek valley at POI-4	NASHYD	0.70	85	4.48	0	0								0.21	Phase 1
DISCHARGING TO SHELDON CREEK WEST BRANCH VIA MAINWAY STORM SEWERS																
EXT-23	Ploughed field draining to Sheldon Creek Wetland 1 (SCW-1)	NASHYD	0.80	85	4.48	0	0								0.22	Phase 1
106	Ploughed field draining to Mainway at West SWM Facility	NASHYD	4.12	85	4.48	0	0								0.33	Phase 1
115	Ploughed Field draining to Mainway at POI-13	NASHYD	1.24	85	4.48	0	0								0.24	Current
116	Ploughed Field draining to Mainway at POI-12	NASHYD	1.28	85	4.48	0	0								0.25	Current
135	Woodlot draining to Sheldon Creek Tributary at POI-12	NASHYD	0.71	85	4.48	0	0								0.20	Current
136	Woodlot draining to Sheldon Creek Tributary at POI-12	NASHYD	1.92	85	4.48	0	0								0.23	Current
138	Sheldon Creek Wetland 3 (SCW-3) draining to West SWM Facility	NASHYD	1.01	85	4.48	0	0	0.20							0.22	Current
139	Sheldon Creek Wetland 3 (SCW-3) draining to West SWM Facility	NASHYD	2.16	85	4.48	0	0	0.20							0.26	Current
140	Sheldon Creek Wetland 1 (SCW-1) draining to Sheldon Creek Tributary at POI-7	NASHYD	2.22	85	4.48	0	0	0.20							0.27	Current
141	Woodlot draining to Sheldon Creek Tributary at POI-7	NASHYD	1.03	85	4.48	0	0	0.20							0.24	Current
142	Sheldon Creek Wetland 2 (SCW-2) draining to Sheldon Creek Tributary	NASHYD	0.61	85	4.48	0	0								0.18	Current
143	Woodlot draining to Sheldon Creek Tributary at POI-11	NASHYD	0.26	85	4.48	0	0								0.14	Current
144	Woodlot draining to Sheldon Creek Tributary at POI-12	NASHYD	0.54	85	4.48	0	0								0.20	Current
307	Development Area with roof top discharge to SCW-3	STANDHYD	3.63	86	4.13	82	41	0.77	30	30	0.025	0.013	2	1		Phase 1
307A	Ploughed field draining to Sheldon Creek Wetland 1 (SCW-3)	NASHYD	0.29	85	4.48	0	0								0.17	Phase 1/Current
308	Development Area with roof top discharge to SCW-1	STANDHYD	1.62	86	4.13	73	36	0.71	30	30	0.025	0.013	2	1		Phase 1
309	Institutional Block with on-site SWM controls, discharging towards Sheldon Creek via Mainway	STANDHYD	8.29	86	4.13	99	99	0.90	30	30	0.025	0.013	2	1		Phase 1
311	Sutton Drive Right-of-Way	STANDHYD	1.19	86	4.13	99	99	0.90	30	30	0.025	0.013	2	1		Phase 1
DISCHARGING TO SHELDON CREEK EAST BRANCH																
EXT-3	Hydro corridor draining into Catchment 105	NASHYD	0.75	85	4.48	0	0								0.22	Current
EXT-22	Commercial lands draining to Sheldon Creek Tributary	STANDHYD	8.58	85	4.48	58	58	0.58	157.2	246.5	0.025	0.013	1.12	0.91		Current
104	Ploughed field draining to Mainway Woodland at POI-20	NASHYD	4.24	85	4.48	0	0								0.46	Phase 1
105	Ploughed field draining to Sheldon Creek Tributary at POI-21	NASHYD	11.13	85	4.48	0	0								0.42	Phase 1
121	Woodlot discharging to Mainway at POI-23	NASHYD	2.59	85	4.48	0	0								0.29	Current
133	Sheldon Creek Wetland 4 (SCW-4) draining to Sheldon Creek Tributary at POI-22	NASHYD	0.45	85	4.48	0	0								0.19	Current
134	Woodlot draining to Sheldon Creek Tributary at POI-23	NASHYD	2.19	85	4.48	0	0								0.27	Current
401	Park Block	NASHYD	1.10	85	4.48	0	0								0.24	Phase 1
305	Development Area discharging to Sheldon Creek Tributary via West SWM facility	STANDHYD	17.55	86	4.13	82	41	0.77	30	30	0.025	0.013	2	1		Phase 1
306	West SWM Facility	STANDHYD	2.99	86	4.13	50	0	0.40	15	15	0.025	0.013	20	1		Phase 1
DIVERGING BETWEEN SHELDON CREEK EAST BRANCH & BRONTE CREEK TRIBUTARY																
EXT-2	Hydro corridor draining into Catchment 103	NASHYD	0.93	85	4.48	0	0								0.23	Current/Greenfield
EXT-11	Orchard East Subdivision (Entire Site - Post-Development Condition)	STANDHYD	26.50	85	4.48	50	30	0.55	30	420	0.025	0.013	2	2		Greenfield
EXT-17A	Upper Middle Road/Burlak Drive ROW (Post-Development Condition)	STANDHYD	3.93	85	4.48	99	99	0.20	0	115.5	0.025	0.013	1	0.4		Current
EXT-19	Grassed lot draining to Mainway at POI-31	NASHYD	0.69	85	4.48	0	0								0.18	Current/Greenfield
EXT-20	Mainway Roadway draining to Bronte Creek Tributary	STANDHYD	0.82	85	4.48	99	99	0.20	0	18.4	0.025	0.013	1	0.5		Current/Greenfield
120	Woodlot discharging to Mainway at POI-31	NASHYD	3.87	85	4.48	0	0								0.33	Current/Greenfield
127	Woodlot draining to Mainway at POI-31	NASHYD	0.97	85	4.48	0	0								0.23	Current/Greenfield
129	Ploughed field draining to Bronte Creek Tributary at POI-27	NASHYD	14.62	85	4.48	0	0								0.45	Current/Greenfield
130	Bronte Creek Wetland 1 (BCW-1) discharging to Mainway at POI-28	NASHYD	0.22	85	4.48	0	0								0.16	Current/Greenfield
131	Bronte Creek Wetland 2 (BCW-2) discharging to Mainway at POI-29	NASHYD	0.45	85	4.48	0	0								0.16	Current/Greenfield
DISCHARGING TO BRONTE CREEK TRIBUTARY																
EXT-1	Hydro corridor draining into Catchment 124	NASHYD	0.33	85	4.48	0	0								0.18	Current/Greenfield
EXT-4	Hydro corridor draining into Catchment 106	NASHYD	1.05	85	4.48	0	0								0.23	Current
EXT-16	Park lands draining to Bronte Creek Tributary at POI-38 (Greenfield Condition & Current Condition)	NASHYD	31.02	85	4.48	0	0								0.55	Current/Greenfield
EXT-17	Upper Middle Road/Burlak Drive ROW (Current Condition)	STANDHYD	5.85	85	4.48	99	99	0.90	0	78.3	0.025	0.013	1	1.70		Current
EXT-17B	Upper Middle Road/Burlak Drive ROW (Current Condition)	STANDHYD	0.45	85	4.48	99	99	0.90	0	48.3	0.025	0.013	1	0.4		Current
EXT-18	Developed commercial lands draining to Bronte Creek Tributary at POI-37 (Current Condition)	STANDHYD	2.90	85	4.48	80	80	0.76	124.91	166.18	0.025	0.013	0.6	0.7		Current
EXT-21	Commercial lot draining to Bronte Creek Tributary	STANDHYD	1.21	85	4.48	79	79	0.75	63.9	157.2	0.025	0.013	0.5	0.6		Current/Greenfield
101	Ploughed field draining toward Burloak Drive at POI-34	NASHYD	17.88	85	4.48	0	0								0.36	Current/Greenfield
124	Ploughed field draining to POI-29 at Burloak Drive then to POI-33	NASHYD	7.90	85	4.48	0	0								0.25	Current/Greenfield
125	Bronte Creek Wetland 3 (BCW-3) draining to POI-35	NASHYD	0.44	85	4.48	0	0								0.19	Current/Greenfield
126	Woodlot draining to Burloak Drive then to POI-36	NASHYD	0.19	85	4.48	0	0								0.15	Current/Greenfield
		TOTAL	**207.56**													

- For NASHYD commands, N=3
- Pervious Initial Abstraction (Perv. Ia) = 0.1 x S , where S = (25400 / CN) - 254
- Depression Storage over Impervious areas (DPSI) = 2.0 mm

Bronte Creek Meadows
Visual OTTHYMO Hydrologic Modelling - Phase 1 Condition Schematic
Burlington, Ontario
Project Number: 22662-104
Date: February 12, 2026

NAMING CONVENTION

NAME FORMAT - VWWWXYYYZ

- "V" REPRESENTS GLYPH TYPE
  6 = ROUTE CHANNEL
  5 = ADDHYD & DIVERTHYD
  4 = CATCHMENTS
  3 = PONDS

- "WWW" REPRESENTS SUBCATCHMENT ID

- "X" REPRESENTS SUB-SUBCATCHMENT AREA

- "YYY" REPRESENTS CATCHMENT ID
  100s - 300s = INTERNAL CATCHMENT IDs
  001s - 025s = EXTERNAL CATCHMENT IDs

- "Z" REPRESENTS CATCHMENT ID SUBGROUP
  1 = A
  2 = B

SHELDON CREEK INTER-WATERSHED SPILL MODELLED DURING
- 100-YEAR STORM
- REGIONAL STORM

SHELDON CREEK INTRA-WATERSHED SPILL MODELLED DURING
- 100-YEAR STORM

BRONTE CREEK MEADOWS STUDY AREA

SHELDON CREEK INTRA-WATERSHED SPILL MODELLED DURING
- 100-YEAR STORM

BRONTE CREEK MEADOWS STUDY AREA

EXTERNAL PONDS MODELLED DURING
- 2 TO 50-YEAR STORMS
- 100-YEAR STORM
- REGIONAL STORM

EXTERNAL PONDS MODELLED DURING
- 2 TO 50-YEAR STORMS
- 100-YEAR STORM

Bronte Creek Meadows
Sheldon Creek & Bronte Creek Tributary VO Hydrologic Modeling Input Parameters - Phase 1 Condition
Burlington, Ontario
Project Number: 52982-104
Date: February 20, 2026
Design Storms: 2yr to 100yr & Regional & 25mm WQ Event

NASHYD Parameters - 2yr to 100yr & 25mm WQ Event

NasHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	DT [min]	AREA [ha]	DWF [m³/s]	CN	IA [mm]	N	TP [hr]	STORM INDEX	RAIN [mm/hr]
1	40010	SD0010				50010	5	43.088	0	79.50	8.41	3.0	0.47	1	0
2	40030	SD0030				50010	5	54.8839	0	79.37	8.34	3.0	0.46	1	0
3	40120	SD0120				50130	5	44.596	0	80.85	7.89	3.0	0.43	1	0
4	40130	SD0130				50130	5	63.82	0	82.70	7.55	3.0	0.50	1	0
5	40361140	Bronte Creek Meadows - 140/SCW-1				50361003	5	2.22	0	85	4.48	3.0	0.27	1	0
6	40361142	Bronte Creek Meadows - 142/SCW-2				50361007	5	0.61	0	85	4.48	3.0	0.18	1	0
7	40361139	Bronte Creek Meadows - 139/SCW-3 Lower				50361012	5	2.16	0	85	4.48	3.0	0.26	1	0
8	40361136	Bronte Creek Meadows - 136				50361006	5	1.92	0	85	4.48	3.0	0.23	1	0
9	40361144	Bronte Creek Meadows - 144				50361008	5	0.54	0	85	4.48	3.0	0.20	1	0
10	40361143	Bronte Creek Meadows - 143				50361008	5	0.26	0	85	4.48	3.0	0.14	1	0
11	40361138	Bronte Creek Meadows - 138/SCW-3 Upper				50361011	5	1.01	0	85	4.48	3.0	0.22	1	0
12	40361141	Bronte Creek Meadows - 141				50361005	5	1.03	0	85	4.48	3.0	0.24	1	0
13	40390	SD0390				50390	5	20.5503	0	80.43	8.47	3.0	0.2	1	0
14	40421116	Bronte Creek Meadows - 116/POI-12				50421001	5	1.28	0	85	4.48	3.0	0.25	1	0
15	40421115	Bronte Creek Meadows - 115/POI-13				50421001	5	1.24	0	85	4.48	3.0	0.24	1	0
16	40421106	Bronte Creek Meadows - 106				50421001	5	4.12	0	85	4.48	3.0	0.33	1	0
17	40651002	Bronte Creek Meadows - EXT2				50651009	5	0.93	0	85	4.48	3.0	0.23	1	0
18	40651131	Bronte Creek Meadows - 131/BCW-2/POI-29				50651013	5	0.45	0	85	4.48	3.0	0.16	1	0
19	40651127	Bronte Creek Meadows - 127				50651015	5	0.97	0	85	4.48	3.0	0.23	1	0
20	40651133	Bronte Creek Meadows - 133/SCW-4/POI-22				50651003	5	0.45	0	85	4.48	3.0	0.19	1	0
21	40651016	Bronte Creek Meadows - EXT16				50651033	5	31.02	0	85	4.48	3.0	0.55	1	0
22	40651124	Bronte Creek Meadows - 124				50651032	5	7.90	0	85	4.48	3.0	0.39	1	0
23	40651101	Bronte Creek Meadows - 101/POI-34				50651030	5	17.88	0	85	4.48	3.0	0.48	1	0
24	40651105	Bronte Creek Meadows - 105				50651002	5	11.13	0	85	4.48	3.0	0.42	1	0
25	40651104	Bronte Creek Meadows - 104				50651007	5	4.24	0	85	4.48	3.0	0.46	1	0
26	40651125	Bronte Creek Meadows - 125/BCW-3				50651030	5	0.44	0	85	4.48	3.0	0.19	1	0
27	40651126	Bronte Creek Meadows - 126				50651031	5	0.19	0	85	4.48	3.0	0.15	1	0
28	40651130	Bronte Creek Meadows - 130/BCW-1/POI-28				50651012	5	0.22	0	85	4.48	3.0	0.16	1	0
29	40651120	Bronte Creek Meadows - 120				50651013	5	3.87	0	85	4.48	3.0	0.33	1	0
30	40651121	Bronte Creek Meadows - 121				50651008	5	2.59	0	85	4.48	3.0	0.29	1	0
31	40651019	Bronte Creek Meadows - EXT19				50651015	5	0.69	0	85	4.48	3.0	0.18	1	0
32	40651134	Bronte Creek Meadows - 134				50651004	5	2.19	0	85	4.48	3.0	0.27	1	0
33	40651003	Bronte Creek Meadows - EXT3				50651001	5	0.75	0	85	4.48	3.0	0.22	1	0
34	40651129	Bronte Creek Meadows - 129				50651010	5	14.62	0	85	4.48	3.0	0.45	1	0
35	40651001	Bronte Creek Meadows - EXT1				50651032	5	0.33	0	85	4.48	3.0	0.18	1	0
36	40361023	Bronte Creek Meadows - EXT23				50361002	5	0.80	0	85	4.48	3.0	0.22	1	0
37	40361024	Bronte Creek Meadows - EXT24/POI-4				50360	5	0.70	0	85	4.48	3.0	0.21	1	0
38	404651004	Bronte Creek Meadows - EXT4				50651006	5	1.05	0	85	4.48	3.0	0.23	1	0
39	40361135	Bronte Creek Meadows - 135				50361006	5	0.71	0	85	4.48	3.0	0.20	1	0
40	404651401	Bronte Creek Meadows - 401				50651006	5	1.10	0	85	4.48	3.0	0.24	1	0
41	403613071	Bronte Creek Meadows - 307A				50361010	5	0.29	0	85	4.48	3.0	0.17	1	0

NASHYD Parameters - Regional

NasHyd (41) | StandHyd (72) | AddHyd (95) | Junction (3) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (3) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	DT [min]	AREA [ha]	DWF [m³/s]	CN	IA [mm]	N	TP [hr]	STORM INDEX	RAIN [mm/hr]
1	40010	SD0010			The CN is converted to CNIII on 2022-02-08	50010	5	43.088	0	90	8.41	3.0	0.47	1	0
2	40030	SD0030			The CN is converted to CNIII on 2022-02-08	50010	5	54.8839	0	90	8.34	3.0	0.46	1	0
3	40120	SD0120			The CN is converted to CNIII on 2022-02-08	50130	5	44.596	0	91	7.89	3.0	0.43	1	0
4	40130	SD0130			The CN is converted to CNIII on 2022-02-08	50130	5	63.82	0	92	7.55	3.0	0.50	1	0
5	40390	SD0390			The CN is converted to CNIII on 2025-07-07	50390	5	20.5503	0	90	8.47	3.0	0.2	1	0
6	40651104	Bronte Creek Meadows - 104			The CN is converted to CNIII on 2025-07-07	50651007	5	4.24	0	93	4.48	3.0	0.46	1	0
7	40651129	Bronte Creek Meadows - 129			The CN is converted to CNIII on 2025-07-07	50651010	5	14.62	0	93	4.48	3.0	0.45	1	0
8	40651101	Bronte Creek Meadows - 101/POI-34			The CN is converted to CNIII on 2025-07-07	50651030	5	17.88	0	93	4.48	3.0	0.48	1	0
9	40651001	Bronte Creek Meadows - EXT1			The CN is converted to CNIII on 2025-07-07	50651033	5	0.33	0	93	4.48	3.0	0.18	1	0
10	40651121	Bronte Creek Meadows - 121			The CN is converted to CNIII on 2025-07-07	50651008	5	2.59	0	93	4.48	3.0	0.29	1	0
11	40651120	Bronte Creek Meadows - 120			The CN is converted to CNIII on 2025-07-07	50651013	5	3.87	0	93	4.48	3.0	0.33	1	0
12	40651130	Bronte Creek Meadows - 130/BCW-1/POI-28			The CN is converted to CNIII on 2025-07-07	50651012	5	0.22	0	93	4.48	3.0	0.16	1	0
13	40651127	Bronte Creek Meadows - 127			The CN is converted to CNIII on 2025-07-07	50651015	5	0.97	0	93	4.48	3.0	0.23	1	0
14	40651125	Bronte Creek Meadows - 125/BCW-3			The CN is converted to CNIII on 2025-07-07	50651030	5	0.44	0	93	4.48	3.0	0.19	1	0
15	40651016	Bronte Creek Meadows - EXT16			The CN is converted to CNIII on 2025-07-07	50651034	5	31.02	0	93	4.48	3.0	0.55	1	0
16	40651131	Bronte Creek Meadows - 131/BCW-2/POI-29			The CN is converted to CNIII on 2025-07-07	50651013	5	0.45	0	93	4.48	3.0	0.16	1	0
17	40651105	Bronte Creek Meadows - 105			The CN is converted to CNIII on 2025-07-07	50651002	5	11.13	0	93	4.48	3.0	0.42	1	0
18	40651003	Bronte Creek Meadows - EXT3			The CN is converted to CNIII on 2025-07-07	50651001	5	0.75	0	93	4.48	3.0	0.22	1	0
19	40651126	Bronte Creek Meadows - 126			The CN is converted to CNIII on 2025-07-07	50651031	5	0.19	0	93	4.48	3.0	0.15	1	0
20	40651124	Bronte Creek Meadows - 124			The CN is converted to CNIII on 2025-07-07	50651033	5	7.90	0	93	4.48	3.0	0.39	1	0
21	40651019	Bronte Creek Meadows - EXT19			The CN is converted to CNIII on 2025-07-07	50651015	5	0.69	0	93	4.48	3.0	0.18	1	0
22	40651134	Bronte Creek Meadows - 134			The CN is converted to CNIII on 2025-07-07	50651004	5	2.19	0	93	4.48	3.0	0.27	1	0
23	40651133	Bronte Creek Meadows - 133/SCW-4/POI-22			The CN is converted to CNIII on 2025-07-07	50651003	5	0.45	0	93	4.48	3.0	0.19	1	0
24	40651002	Bronte Creek Meadows - EXT2			The CN is converted to CNIII on 2025-07-07	50651009	5	0.93	0	93	4.48	3.0	0.23	1	0
25	40421116	Bronte Creek Meadows - 116/POI-12			The CN is converted to CNIII on 2025-07-07	50421002	5	1.28	0	93	4.48	3.0	0.25	1	0
26	40361138	Bronte Creek Meadows - 138/SCW-3 Upper			The CN is converted to CNIII on 2025-07-07	50361011	5	1.01	0	93	4.48	3.0	0.22	1	0
27	40361141	Bronte Creek Meadows - 141			The CN is converted to CNIII on 2025-07-07	50361005	5	1.03	0	93	4.48	3.0	0.24	1	0
28	40421106	Bronte Creek Meadows - 106			The CN is converted to CNIII on 2025-07-07	50421002	5	4.12	0	93	4.48	3.0	0.33	1	0
29	40361142	Bronte Creek Meadows - 142/SCW-2			The CN is converted to CNIII on 2025-07-07	50361007	5	0.61	0	93	4.48	3.0	0.18	1	0
30	40361136	Bronte Creek Meadows - 136			The CN is converted to CNIII on 2025-07-07	50361006	5	1.92	0	93	4.48	3.0	0.23	1	0
31	40361140	Bronte Creek Meadows - 140/SCW-1			The CN is converted to CNIII on 2025-07-07	50361003	5	2.22	0	93	4.48	3.0	0.27	1	0
32	40361144	Bronte Creek Meadows - 144			The CN is converted to CNIII on 2025-07-07	50361008	5	0.54	0	93	4.48	3.0	0.20	1	0
33	40421115	Bronte Creek Meadows - 115/POI-13			The CN is converted to CNIII on 2025-07-07	50421002	5	1.24	0	93	4.48	3.0	0.24	1	0
34	40361139	Bronte Creek Meadows - 139/SCW-3 Lower			The CN is converted to CNIII on 2025-07-07	50361012	5	2.16	0	93	4.48	3.0	0.26	1	0
35	40361143	Bronte Creek Meadows - 143			The CN is converted to CNIII on 2025-07-07	50361008	5	0.26	0	93	4.48	3.0	0.14	1	0
36	40361023	Bronte Creek Meadows - EXT23			The CN is converted to CNIII on 2025-07-07	50361002	5	0.80	0	93	4.48	3.0	0.22	1	0
37	40361024	Bronte Creek Meadows - EXT24/POI-4				50360	5	0.70	0	85	4.48	3.0	0.21	1	0
38	40651004	Bronte Creek Meadows - EXT4			The CN is converted to CNIII on 2025-07-07	50651006	5	1.05	0	93	4.48	3.0	0.23	1	0
39	40361135	Bronte Creek Meadows - 135			The CN is converted to CNIII on 2025-07-07	50361006	5	0.71	0	93	4.48	3.0	0.2	1	0
40	403613071	Bronte Creek Meadows - 307A			The CN is converted to CNIII on 2025-07-07	50361010	5	0.29	0	93	4.48	3.0	0.17	1	0
41	404651401	Bronte Creek Meadows - 401			The CN is converted to CNIII on 2025-07-07	50651006	5	1.10	0	93	4.48	3.0	0.24	1	0

STANHYD Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NasHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	DT [min]	AREA [ha]	TIMP	XIMP	DWF [m³/s]	LOSS	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI Type	LGI [m]	MNI	SCI [hr]
1	40020	SD0020	Future			50020	5	51.3181	0.66	0.56	0	Modified SCS Curve Method	1.3	50	0.29	0.0	2	1.3	Based on A = 1.5 * L^2	584.91	0.015	0.0
2	40040	SD0040	Future			50220	5	70.683	0.74	0.60	0	Modified SCS Curve Method	1.2	52	0.28	0.0	2	1.2	Based on A = 1.5 * L^2	686.45	0.015	0.0
3	40050	SD0050	Future			50040	5	52.2782	0.63	0.49	0	Modified SCS Curve Method	3.3	68	0.27	0.0	2	3.3	Based on A = 1.5 * L^2	590.36	0.015	0.0
4	40060	SD0060				50070	5	2.8386	0.3312	0.2627	0	Modified SCS Curve Method	2.6	98	0.32	0.0	2	2.6	Based on A = 1.5 * L^2	137.56	0.015	0.0
5	40080	SD0080	Future			50080	5	39.8489	0.66	0.54	0	Modified SCS Curve Method	1.4	72	0.27	0.0	2	1.4	Based on A = 1.5 * L^2	515.42	0.015	0.0
6	40090	SD0090				50090	5	4.4473	0.2223	0.1377	0	Modified SCS Curve Method	2.4	99	0.37	0.0	2	2.4	Based on A = 1.5 * L^2	172.19	0.015	0.0
7	40100	SD0100				50110	5	26.8961	0.4631	0.4242	0	Modified SCS Curve Method	1.4	125	0.28	0.0	2	1.4	Based on A = 1.5 * L^2	423.45	0.015	0.0
8	40140	SD0140	Future			50180	5	65.7606	0.71	0.61	0	Modified SCS Curve Method	1.3	66	0.29	0.0	2	1.3	Based on A = 1.5 * L^2	662.12	0.015	0.0
9	40180	SD0180	Future			50200	5	13.8862	0.76	0.73	0	Modified SCS Curve Method	1	66	0.31	0.0	2	1	Based on A = 1.5 * L^2	304.26	0.015	0.0
10	40190	SD0190				60190	5	13.7828	0.4161	0.3864	0	Modified SCS Curve Method	2.4	131	0.35	0.0	2	2.4	Based on A = 1.5 * L^2	303.13	0.015	0.0
11	40200	SD0200				50200	5	22.9419	0.759	0.7475	0	Modified SCS Curve Method	3	150	0.29	0.0	2	3	Based on A = 1.5 * L^2	391.08	0.015	0.0
12	40210	SD0210	No DuHyd defined / Because pond data is not available			50210	5	6.0729	0.8251	0.8177	0	Modified SCS Curve Method	0.9	118	0.29	0.0	2	0.9	Based on A = 1.5 * L^2	201.21	0.015	0.0
13	40220	SD0220				50120	5	11.3154	0.7877	0.7776	0	Modified SCS Curve Method	0.6	79	0.29	0.0	2	0.6	Based on A = 1.5 * L^2	274.66	0.015	0.0
14	40150	SD0150				50160	5	5.3685	0.5784	0.5213	0	Modified SCS Curve Method	2.3	45	0.29	0.0	2	2.3	Based on A = 1.5 * L^2	189.18	0.015	0.0
15	40240	SD0240				50250	5	10.2847	0.8545	0.8488	0	Modified SCS Curve Method	3.4	70	0.27	0.0	2	3.4	Based on A = 1.5 * L^2	261.85	0.015	0.0
16	40250	SD0250				60240	5	13.3593	0.6444	0.6289	0	Modified SCS Curve Method	2	70	0.32	0.0	2	2	Based on A = 1.5 * L^2	298.43	0.015	0.0
17	40260	SD0260	Future			50260	5	28.4473	0.56	0.43	0	Modified SCS Curve Method	1.3	46	0.3	0.0	2	1.3	Based on A = 1.5 * L^2	435.49	0.015	0.0
18	40270	SD0270				50270	5	9.8315	0.3177	0.2201	0	Modified SCS Curve Method	1.1	73	0.33	0.0	2	1.1	Based on A = 1.5 * L^2	256.01	0.015	0.0
19	40280	SD0280				50280	5	31.3045	0.644	0.5166	0	Modified SCS Curve Method	1.1	53	0.31	0.0	2	1.1	Based on A = 1.5 * L^2	456.83	0.015	0.0
20	40300	SD0300				50300	5	11.5252	0.5826	0.4496	0	Modified SCS Curve Method	1.6	63	0.34	0.0	2	1.6	Based on A = 1.5 * L^2	277.19	0.015	0.0
21	40290	SD0290				50340	5	9.1671	0.3026	0.2352	0	Modified SCS Curve Method	3.2	43	0.35	0.0	2	3.2	Based on A = 1.5 * L^2	247.21	0.015	0.0
22	40370	SD0370	including 0.48ha ds of Mainway			60370	5	17.93	0.6598	0.5233	0	Modified SCS Curve Method	1.5	42	0.28	0.0	2	1.5	Based on A = 1.5 * L^2	345.74	0.015	0.0
23	40410	SD0410				50410	5	7.9179	0.286	0.2507	0	Modified SCS Curve Method	1.1	574	0.35	0.0	2	1.1	Based on A = 1.5 * L^2	229.75	0.015	0.0
24	40420	SD0420	Future			50421002	5	67.5711	0.31	0.25	0	Modified SCS Curve Method	1.9	89	0.24	0.0	2	1.9	Based on A = 1.5 * L^2	671.17	0.015	0.0
25	40430	SD0430	Future			50430	5	32.4341	0.66	0.64	0	Modified SCS Curve Method	3.5	102	0.32	0.0	2	3.5	Based on A = 1.5 * L^2	465	0.015	0.0
26	40440	SD0440	Future			50440	5	57.1147	0.66	0.65	0	Modified SCS Curve Method	2.5	45	0.29	0.0	2	2.5	Based on A = 1.5 * L^2	617.06	0.015	0.0
27	40450	SD0450	Future			50450	5	30.3967	0.44	0.41	0	Modified SCS Curve Method	0.8	150	0.30	0.0	2	0.8	Based on A = 1.5 * L^2	450.16	0.015	0.0
28	40460	SD0460				50460	5	22.3997	0.6856	0.5284	0	Modified SCS Curve Method	2.4	40	0.28	0.0	2	2.4	Based on A = 1.5 * L^2	386.43	0.015	0.0
29	40470	SD0470	Future			50470	5	90.1904	0.66	0.54	0	Modified SCS Curve Method	1.4	40	0.28	0.0	2	1.4	Based on A = 1.5 * L^2	775.42	0.015	0.0
30	40480	SD0480				50480	5	56.4298	0.7588	0.5898	0	Modified SCS Curve Method	1.9	40	0.26	0.0	2	1.9	Based on A = 1.5 * L^2	613.35	0.015	0.0
31	40490	SD0490				50490	5	16.7613	0.7518	0.6042	0	Modified SCS Curve Method	1.4	53	0.27	0.0	2	1.4	Based on A = 1.5 * L^2	334.28	0.015	0.0
32	40810	SD0810				50810	5	20.6372	0.7713	0.6123	0	Modified SCS Curve Method	2.1	40	0.26	0.0	2	2.1	Based on A = 1.5 * L^2	370.92	0.015	0.0
33	40500	SD0500				50500	5	9.323	0.2699	0.1748	0	Modified SCS Curve Method	3.2	47	0.35	0.0	2	3.2	Based on A = 1.5 * L^2	249.31	0.015	0.0
34	40600	SD0600				60600	5	78.3696	0.6908	0.5626	0	Modified SCS Curve Method	1.2	47	0.26	0.0	2	1.2	Based on A = 1.5 * L^2	722.82	0.015	0.0
35	40610	SD0610				50600	5	3.9381	0.4452	0.3162	0	Modified SCS Curve Method	2.9	40	0.34	0.0	2	2.9	Based on A = 1.5 * L^2	162.03	0.015	0.0
36	40620	SD0620				50610	5	5.6694	0.7585	0.6066	0	Modified SCS Curve Method	1.5	43	0.27	0.0	2	1.5	Based on A = 1.5 * L^2	194.41	0.015	0.0
37	40640	SD0640				50630	5	2.1323	0.4254	0.3160	0	Modified SCS Curve Method	1.7	45	0.33	0.0	2	1.7	Based on A = 1.5 * L^2	119.23	0.015	0.0
38	40630	SD0630				50640	5	20.5363	0.6395	0.5266	0	Modified SCS Curve Method	1.4	42	0.27	0.0	2	1.4	Based on A = 1.5 * L^2	370.01	0.015	0.0
39	40670	SD0670	Future			50670	5	50.7614	0.73	0.72	0	Modified SCS Curve Method	1.5	82	0.28	0.0	2	1.5	Based on A = 1.5 * L^2	581.73	0.015	0.0
40	40700	SD0700				50680	5	10.8563	0.5732	0.5511	0	Modified SCS Curve Method	2.3	47	0.35	0.0	2	2.3	Based on A = 1.5 * L^2	269.03	0.015	0.0
41	40680	SD0680				50690	5	1.1955	0.4195	0.3892	0	Modified SCS Curve Method	0.6	69	0.35	0.0	2	0.6	Based on A = 1.5 * L^2	89.27	0.015	0.0
42	40690	SD0690				50690	5	25.4937	0.3111	0.275	0	Modified SCS Curve Method	3.1	40	0.35	0.0	2	3.1	Based on A = 1.5 * L^2	412.26	0.015	0.0
43	40710	SD0710				50710	5	6.3542	0.2465	0.2075	0	Modified SCS Curve Method	3.9	41	0.36	0.0	2	3.9	Based on A = 1.5 * L^2	205.82	0.015	0.0
44	40720	SD0720				70150	5	25.0371	0.8435	0.8366	0	Modified SCS Curve Method	3	40	0.27	0.0	2	3	Based on A = 1.5 * L^2	408.55	0.015	0.0
45	40730	SD0730	Future			70160	5	14.1545	0.76	0.75	0	Modified SCS Curve Method	3.1	41	0.29	0.0	2	3.1	Based on A = 1.5 * L^2	307.19	0.015	0.0
46	40770	SD0770	Future			70170	5	69.4286	0.81	0.80	0	Modified SCS Curve Method	1.7	43	0.27	0.0	2	1.7	Based on A = 1.5 * L^2	680.34	0.015	0.0
47	40780	SD0780	Future			50780	5	24.5717	0.52	0.50	0	Modified SCS Curve Method	1.5	43	0.33	0.0	2	1.5	Based on A = 1.5 * L^2	404.74	0.015	0.0
48	40790	SD0790	imp%, ia, mnp, and cn corrected based on imagery			50795	5	8.1823	0.657	0.628	0	Modified SCS Curve Method	1.2	52	0.27	0.0	2	1.2	Based on A = 1.5 * L^2	233.56	0.015	0.0
49	40800	SD0800	Future			50795	5	5.15	0.904	0.902	0	Modified SCS Curve Method	1.4	48	0.33	0.0	2	1.4	Based on A = 1.5 * L^2	185.29	0.015	0.0
50	40805	SD0805				50790	5	3.57	0.395	0.347	0	Modified SCS Curve Method	2.0	40.0	0.25	0.0	1.0	1.0	Based on A = 1.5 * L^2	154.27	0.013	0.0
51	40820	SD0820				50820	5	14.2052	0.2097	0.1298	0	Modified SCS Curve Method	2.3	44	0.39	0.0	2	2.3	Based on A = 1.5 * L^2	307.74	0.015	0.0
52	40830	SD0830				50840	5	45.5125	0.6671	0.5345	0	Modified SCS Curve Method	1.3	40	0.27	0.0	2	1.3	Based on A = 1.5 * L^2	550.83	0.015	0.0
53	40840	SD0840				50840	5	2.0425	0.2224	0.1444	0	Modified SCS Curve Method	3.2	69	0.37	0.0	2	3.2	Based on A = 1.5 * L^2	116.69	0.015	0.0
54	40850	SD0850				50850	5	26.3253	0.3092	0.2462	0	Modified SCS Curve Method	2	142	0.31	0.0	2	2	Based on A = 1.5 * L^2	418.93	0.015	0.0
55	40880	SD0880				60880	5	56.14	0.37	0.34	0	Modified SCS Curve Method	1.3	120	0.33	0.0	2	1.3	Based on A = 1.5 * L^2	611.77	0.015	0.0
56	40890	SD0890				50890	5	41.71	0.4373	0.3285	0	Modified SCS Curve Method	1.1	85	0.35	0.0	2	1.1	Based on A = 1.5 * L^2	527.32	0.015	0.0
57	40900	SD0900				90020	5	13.56	0.62	0.48	0	Modified SCS Curve Method	2.0	43.0	0.31	0.0	1.0	1.0	Based on A = 1.5 * L^2	300.67	0.015	0.0
58	40910	SD0910				50910	5	6.9164	0.6898	0.5291	0	Modified SCS Curve Method	1.7	44	0.28	0.0	2	1.7	Based on A = 1.5 * L^2	214.73	0.015	0.0
59	40651022	Bronte Creek Meadows - EXT22				50650	5	8.58	0.58	0.58	0	Modified SCS Curve Method	1.12	157.18	0.3	0.0	2	0.91	Manual Input	246.54	0.015	0.0
60	40361309	Bronte Creek Meadows - 309				50361006	5	8.29	0.99	0.99	0	Modified SCS Curve Method	2.0	30	0.025	0.0	2	1.0	Manual Input	30	0.013	0.0
61	40361308	Bronte Creek Meadows - 308				50361001	5	1.62	0.73	0.36	0	Modified SCS Curve Method	2.0	30	0.025	0.0	2	1.0	Manual Input	30	0.013	0.0
62	40361307	Bronte Creek Meadows - 307/POI-9				50361009	5	3.63	0.82	0.41	0	Modified SCS Curve Method	2.0	30	0.025	0.0	2	1.0	Manual Input	30	0.013	0.0
63	40361311	Bronte Creek Meadows - 311				50361006	5	1.19	0.99	0.99	0	Modified SCS Curve Method	2.0	30	0.025	0.0	2	1.0	Manual Input	30	0.013	0.0
64	406510171	Bronte Creek Meadows - EXT17A				50651009	5	3.93	0.99	0.99	0	Modified SCS Curve Method	1.0	0.001	0.03	0.0	2	0.4	Manual Input	115.5	0.013	0.0
65	406510172	Bronte Creek Meadows - EXT17B				50651009	5	0.45	0.99	0.99	0	Modified SCS Curve Method	1.0	0.001	0.03	0.0	2	0.4	Manual Input	48.3	0.013	0.0
66	40651017	Bronte Creek Meadows - EXT17				50651026	5	5.85	0.99	0.99	0	Modified SCS Curve Method	1.0	0.001	0.03	0.0	2	1.7	Manual Input	78.3	0.013	0.0
67	40651020	Bronte Creek Meadows - EXT20				50651024	5	0.82	0.99	0.99	0	Modified SCS Curve Method	1.0	0.1	0.03	0.0	2	0.5	Manual Input	18.4	0.013	0.0
68	40651021	Bronte Creek Meadows - EXT21				50651019	5	1.21	0.79	0.79	0	Modified SCS Curve Method	0.54	157.2	0.03	0.0	2	0.64	Manual Input	63.89	0.013	0.0
69	40651306	Bronte Creek Meadows - 306				50651006	5	2.99	0.50	0.01	0	Modified SCS Curve Method	20	15	0.025	0.0	2	1.0	Manual Input	15	0.013	0.0
70	40651011	Bronte Creek Meadows - EXT11				30651003	5	26.5	0.50	0.30	0	Modified SCS Curve Method	2.0	30	0.025	0.0	2	2.0	Manual Input	420	0.013	0.0
71	40651018	Bronte Creek Meadows - EXT18				50651019	5	2.90	0.80	0.80	0	Modified SCS Curve Method	0.6	124.91	0.03	0.0	2	0.7	Manual Input	166.18	0.013	0.0
72	40651305	Bronte Creek Meadows - 305				50651006	5	17.55	0.82	0.41	0	Modified SCS Curve Method	2.0	30	0.025	0.0	2	1.0	Manual Input	30	0.013	0.0

ADDHYD Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NashHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET
1	50910	SDI0910				
2	50890	SDI0890				60900
3	50850	SDI0850	Lakeshore Road West			50890
4	50640	SDI0640	Great Lakes Boulevard			60840
5	50830	SDI0830				60830
6	50500	SDI0500				50830
7	50810	SDI0810				50500
8	50490	SDI0490	Burloak Drive			60490
9	50480	SDI0480	Spruce Avenue			60480
10	50470	SDI0470	New Street			60470
11	50460	SDI0460				60460
12	50450	SDI0450				60450
13	50440	SDI0440	Harvester Road			60440
14	50430	SDI0430/POI-17	QEW			60430
15	50420	SDI0420/POI-16				60420
16	50410	SDI0410				50420
17	50400	SDI0400				60400
18	50390	SDI0390				50400
19	50350	SDI0350/POI-1				60350
20	50110	SDI0110				50350
21	50090	SDI0090	Upper Middle Rd			60100
22	50080	SDI0080				60080
23	50070	SDI0070				50080
24	50040	SDI0040				60050
25	50220	SDI0220				70010
26	50020	SDI0020				60020
27	50010	SDI0010				60010
28	50340	SDI0340				50350
29	50300	SDI0300	Upper Middle Rd			60300
30	50280	SDI0280				60280
31	50270	SDI0270				50280
32	50260	SDI0260				60260
33	50250	SDI0250				60250
34	50160	SDI0160				50250
35	50140	SDI0140	Downstream of Dundas St			60140
36	50180	SDI0180				50140
37	50130	SDI0130				60130
38	50120	SDI0120	Dundas St and Appleby Line			50140
39	50210	SDI0210	Dundas Street			60210
40	50200	SDI0200				50210
41	50820	SDI0820				50830
42	50800	SDI0800				60800
43	50780	SDI0780	Rebecca Street			50800
44	50770	SDI0770				60770
45	50730	SDI0730	CNR Oakville			60730

NashHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET
45	50730	SDI0730	CNR Oakville			60730
46	50710	SDI0710				50730
47	50700	SDI0700				60700
48	50680	SDI0680				50700
49	50670	SDI0670/QEW/POI-25	QEW			60670
50	50650	SDI0650/POI-24/Confluence of Heine Court Storm Sewer with Sheldon Creek (East Branch)/Minor via Mainway & Heine Court Storm Sewers & Major Overland spill from Mainway to Heine Court	Mainway			60650
51	50640	SDI0640	Upper Middle Road			30651001
52	50630	SDI0630				50640
53	50610	SDI0610				60620
54	50600	SDI0600				60610
55	50690	SDI0690				50700
56	50790	SDI0790				50800
57	50795	SDI0795				70180
58	50361006	ADDHYD 3				30361001
59	50361002	POI-8				50361003
60	50361005	POI-7				50361006
61	50361008	ADD 1004				50361006
62	50361011	POI-10				50361012
63	50361012	ADD6				50361006
64	50421001	To Sheldon Creek Via Mainway and Sutton Drive Storm Sewers/POI-13/POI-14				50421002
65	50651012	POI-27/Major Flows from POI-100				60651006
66	50651013	POI-30				60651007
67	50651009	POI-26				50651010
68	50651014	POI-31				50651016
69	50651005	To Sheldon Creek Tributary/POI-23				50650
70	50651015	POI-32				50651014
71	50651030	POI-35				50651031
72	50651001	POI-18				50651002
73	50651002	ADD 105				60651001
74	50651029	To Bronte Creek Tributary Via Burloak Drive Ditch/Overland spill from Mainway to Overland Flow Route through Reimer Business Park/POI-37				60651009
75	50651008	AddHyd - 2				60651003
76	50651032	POI-33				50651031
77	50651031	POI-36				50651029
78	50651006	ADDHYD6				30651002
79	50651003	POI-21				50651004
80	50651004	AddHyd - 17				60651002
81	50651033	Intersection of Bronte Creek Tribs within Bronte Park/POI-38				
82	50651010	Add 2				60651005
83	50651007	POI-20/Minor Flows from POI-100				50651008
84	50360	SDJC360/Confluence SWMF2 Outlet and Sheldon Creek West Branch/POI-15				60390
85	70012	AddHyd - 110				60040
86	50361007	POI-8				50361008
87	50421002	POI-30				50420
88	50651027	AddHyd - 95				60651008
89	50651026	Major via Overland spill from Burloak Drive				50651027
90	50651028	Flows from POI-30 & POI-32 - Minor via Mainway & Heine Court Storm Sewers & Major via Overland spill from Mainway to Heine Court (To Sheldon Creek Tributary)				50650
91	50651024	Flows from POI-31 - Major via Overland spill from Site to Mainway				50651025
92	50651017	AddHyd - 36				50651022
93	50651021	AddHyd - 38				50651020
94	50651019	AddHyd - 43				50651018
95	50361003	AddHyd - 129				50361004
96	50361010	POI-9				50361011

ROUTECHANNEL Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NasHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	Outlet	Erosion Index	DT [min]	CHLGTH [m]	CHSLOPE [%]	FPSLOPE [%]	VSN	NSEG	DIST/ELEV
1	60900	SDC0900				50910	☐	5	259.52	0.578	0.578	1.1	3	20
2	60840	SDC0840				50850	☐	5	684.424	0.508	0.508	1.1	3	15
3	60830	SDC0830				50840	☐	5	78.069	0.4	0.4	1.1	3	16
4	60490	SDC0490				50810	☐	5	887.51	0.418	0.418	1.1	3	20
5	60480	SDC0480				50490	☐	5	296.732	0.556	0.556	1.1	3	20
6	60470	SDC0470				50480	☐	5	614.237	0.4	0.4	1.1	3	20
7	60460	SDC0460				50470	☐	5	488.944	0.716	0.716	1.1	3	20
8	60450	SDC0450				50460	☐	5	712.185	0.702	0.702	1.1	3	16
9	60440	SDC0440				50450	☐	5	632.132	1.028	1.028	1.1	3	19
10	60430	SDC0430				50440	☐	5	566.994	1.146	1.146	1.1	3	17
11	60420	SDC0420				50430	☐	5	715.026	0.856	0.856	1.1	3	12
12	60400	SDC0400				50410	☐	5	574.211	0.751	0.751	1.1	3	9
13	60390	SDC0390				50390	☐	5	184.404	1.123	1.123	1.1	3	20
14	60350	SDC0350				50360	☐	5	1461.543	0.718	0.718	1.1	3	16
15	60100	SDC0100				50110	☐	5	325.209	0.701	0.701	1.1	3	8
16	60080	SDC0080				50090	☐	5	482.561	0.4	0.4	1.1	3	14
17	60060	SDC0060				50070	☐	5	340.438	0.438	0.438	1.1	3	18
18	60050	SDC0050				60060	☐	5	394.305	0.68	0.68	1.1	3	9
19	60040	SDC0040				50040	☐	5	1276.329	0.493	0.493	1.1	3	20
20	60020	SDC0020				50220	☐	5	227.287	0.4	0.4	1.1	3	20
21	60010	SDC0010				50020	☐	5	1469.526	0.7	0.7	1.1	3	20
22	60300	SDC0300				50340	☐	5	205.049	0.624	0.624	1.1	3	9
23	60280	SDC0280				50300	☐	5	307.123	0.674	0.674	1.1	3	10
24	60260	SDC0260				50270	☐	5	1059.869	0.703	0.703	1.1	3	17
25	60250	SDC0250				50260	☐	5	723.506	0.4	0.4	1.1	3	20
26	60150	SDC0150				50160	☐	5	211.238	0.4	0.4	1.1	3	20
27	60140	SDC0140				60150	☐	5	380.765	0.4	0.4	1.1	3	20
28	60130	SDC0130				50180	☐	5	1409.181	0.563	0.563	1.1	3	20
29	60210	SDC0210				50120	☐	5	303.156	0.4	0.4	1.1	3	14
30	60190	SDC0190				50200	☐	5	411.633	0.476	0.476	1.1	3	20
31	60240	SDC0240				50250	☐	5	631.264	0.998	0.998	1.1	3	12
32	60370	SDC0370				50400	☐	5	141.395	1.061	1.061	1.1	3	18
33	60800	SDC0800				50820	☐	5	1086.985	0.713	0.713	1.1	3	20
34	60770	SDC0770				50780	☐	5	248.835	0.402	0.402	1.1	3	20
35	60730	SDC0730				50770	☐	5	1942.723	0.618	0.618	1.1	3	14
36	60700	SDC0700				50710	☐	5	918.943	1.02	1.02	1.1	3	20
37	60670	SDC0670/Sheldon Creek (East Branch) Channel South of Mainway through SD0670				50680	☐	5	486.895	0.719	0.719	1.1	3	11
38	60650	SDC0650/Sheldon Creek (East Branch) Channel South of Mainway through SD0920				50670	☐	5	326.005	0.975	0.975	1.1	3	18
39	60620	SDC0620				50630	☐	5	178.164	0.78	0.78	1.1	3	20
40	60610	SDC0610				50610	☐	5	332.857	0.427	0.427	1.1	3	20
41	60600	SDC0600				50600	☐	5	375.554	0.533	0.533	1.1	3	16
42	60880	SDC0880				80880	☐	5	725.603	0.729	0.729	1.1	3	14
43	60651009	Bronte Creek Meadows - EXT16 Channel				50651033	☐	5	939.579	1.2	1.2	1.1	3	20
44	60651006	Bronte Creek Meadows - 120 Channel Upper				50651013	☐	5	119.167	0.86	0.86	1.1	3	19
45	60651001	Bronte Creek Meadows - 105 Channel				50651003	☐	5	946.537	1.1	1.1	1.1	3	17
46	60651008	Bronte Creek Meadows - EXT18 Channel				50651029	☐	5	320.276	0.56	0.56	1.1	2	4
47	60651004	Bronte Creek Meadows - 129 Channel				50651007	☐	5	1028.23	1.2	1.2	1.1	4	16
48	60651005	Bronte Creek Meadows - 129 Channel				50651011	☐	5	915.166	1.1	1.1	1.1	3	16
49	60651007	Bronte Creek Meadows - 120 Channel Lower				50651014	☐	5	131.05	1.1	1.1	1.1	3	18
50	60651002	Bronte Creek Meadows - 134 Channel				50651005	☐	5	208.607	0.30	0.30	1.1	3	19
51	60651003	Bronte Creek Meadows - 121 Channel				50651005	☐	5	178.372	1.1	1.1	1.1	3	19

JUNCTION, DIVERTHYD, DUHYD, ROUTEPIPE & RESERVOIR Parameters - 2yr to 100yr & Regional & 25mm WQ Event

NasHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

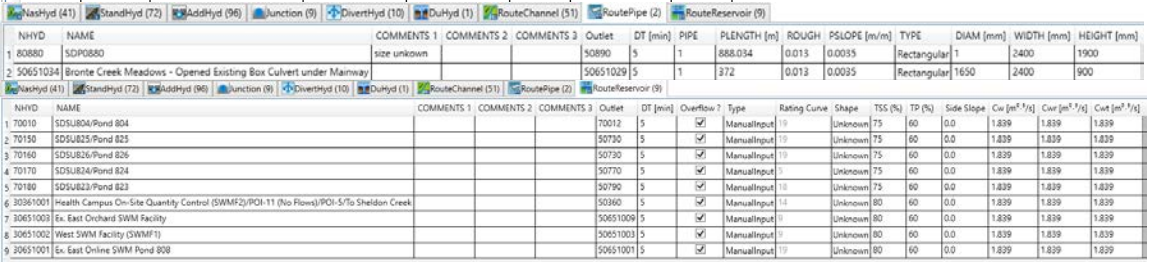
	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	Delineate
1	70011	Pond 804 Overflow				70012	☐
2	70151	Pond 825 Overflow				50730	☐
3	70161	Pond 826 Overflow				50730	☐
4	70181	Pond 823 Overflow				50790	☐
5	70171	Pond 824 Overflow				50770	☐
6	30361002	SWMF2 Overflow				50360	☐
7	30651006	Ex. East Orchard SWM Facility Overflow				50651009	☐
8	30651004	SWMF1 Overflow				50651003	☐

NasHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	FLOWTABLE
1	50651011	Diversion at North side of Mainway Woodlot/POI-100				7
2	50361004	SCW-1 SPLIT/POI-104				3
3	50651025	Diversion at South side of Mainway/POI-102				20
4	50651023	Diversion at North side of Mainway/POI-101	DIVERT24			17
5	50651016	Mainway Culvert INACTIVE				3
6	50651022	Mainway Culvert Capacity				4
7	50651020	Mainway DDICB ACTIVE				3
8	50651018	Reimer Business Park 5-YR Contributations to Maiwnay Culvert				4
9	50361001	DivertHyd - 97				4
10	50361009	DivertHyd - 97				4

NasHyd (41) | StandHyd (72) | AddHyd (96) | Junction (9) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (9)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	FLOW	CINLET [m³/s]	NINLET
1	90020	SDD0020	1200 mm Storm Sewer			☐	0.96	1



	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	Outlet	DT [min]	PIPE	PLENGTH [m]	ROUGH	PSLOPE [m/m]	TYPE	DIAM [mm]	WIDTH [mm]	HEIGHT [mm]
1	80880	SDP0880	size unkown			50890	5	1	888.034	0.013	0.0035	Rectangular	1	2400	1900
2	50651034	Bronte Creek Meadows - Opened Existing Box Culvert under Mainway				50651029	5	1	372	0.013	0.0035	Rectangular	1650	2400	900

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	Outlet	DT [min]	Overflow ?	Type	Rating Curve	Shape	TSS (%)	TP (%)	Side Slope	Cw [m³/s]	Cwr [m³/s]	Cwt [m³/s]
1	70010	SDSUB04/Pond 804				70012	5	☑	ManualInput	19	Unknown	75	60	0.0	1.839	1.839	1.839
2	70150	SDSUB25/Pond 825				50730	5	☑	ManualInput	19	Unknown	75	60	0.0	1.839	1.839	1.839
3	70160	SDSUB26/Pond 826				50730	5	☑	ManualInput	19	Unknown	75	60	0.0	1.839	1.839	1.839
4	70170	SDSUB24/Pond 824				50770	5	☑	ManualInput	9	Unknown	75	60	0.0	1.839	1.839	1.839
5	70180	SDSUB23/Pond 823				50790	5	☑	ManualInput	18	Unknown	75	60	0.0	1.839	1.839	1.839
6	30361001	Health Campus On-Site Quantity Control (SWMF2)/POI-11 (No Flows)/POI-5/To Sheldon Creek				50360	5	☑	ManualInput	14	Unknown	80	60	0.0	1.839	1.839	1.839
7	30651003	Ex. East Orchard SWM Facility				50651009	5	☑	ManualInput	9	Unknown	80	60	0.0	1.839	1.839	1.839
8	30651002	West SWM Facility (SWMF1)				50651003	5	☑	ManualInput	9	Unknown	80	60	0.0	1.839	1.839	1.839
9	30651001	Ex. East Online SWM Pond 808				50651001	5	☑	ManualInput	19	Unknown	80	60	0.0	1.839	1.839	1.829

READHYD Parameters - 100yr
(Inter-watershed spills modeled)

NasHyd (41) | StandHyd (72) | AddHyd (96) | Junction (8) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (8) | ReadHyd (1)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	FilePN
1	400	ReadHyd - 400				50010	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\APtoSD_100Y.HYD

READHYD Parameters - Regional
(Inter- & intra-watershed spills modeled)

NasHyd (41) | StandHyd (72) | AddHyd (95) | Junction (3) | DivertHyd (10) | DuHyd (1) | RouteChannel (51) | RoutePipe (2) | RouteReservoir (3) | ReadHyd (3)

	NHYD	NAME	COMMENTS 1	COMMENTS 2	COMMENTS 3	OUTLET	FilePN
1	407	Appleby Hwy 407				50010	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\APtoSD_REG_Updated.HYD
2	414	ReadHyd - 414				50140	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\SD_Node50140_Reg.HYD
3	416	ReadHyd - 416				50110	Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte Models\Read In Hydrographs\SD_Node50110_Reg.HYD

Note:

25mm Water Quality Event - Page 88 (Line 23611)
2-year - Page 28 (Line 8323)
5-year - Page 115 (Line 35140)
10-year - Page 1 (Line 35)
25-year - Page 55 (Line 16592)
50-year - Page 142 (Line 43418)


```
00001> ================================================================================
00002>
00003>        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
00004>        V    V   I    SS     U   U   A A   L
00005>         V  V    I     SS    U   U  AAAAA  L
00006>         V  V    I      SS   U   U  A   A  L
00007>          VV     I    SSSSS  UUUUU  A   A  LLLLL
00008>
00009>         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
00010>        O   O    T      T    H   H   Y Y   MM MM  O   O
00011>        O   O    T      T    H   H    Y    M M M  O   O
00012>         OOO     T      T    H   H    Y    M   M   OOO
00013> Developed and Distributed by Smart City Water Inc
00014> Copyright 2007 - 2022 Smart City Water Inc
00015> All rights reserved.
00016>
00017>
00018>                  *****  D E T A I L E D   O U T P U T *****
00019>
00020>
00021>   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
00022>   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
00023>   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
00024>
00025>
00026> DATE: 02/19/2026                          TIME: 06:04:00
00027>
00028> USER:
00029>
00030>
00031>
00032> COMMENTS: _____________________________________________________
00033>
00034>
00035> --------------------------------------------------------------------------------
00036>  ************************************************
00037>  ** SIMULATION : 10 Year 12 hr 5 min SCS Type  **
00038>  ************************************************
00039>
00040>
00041> --------------------
00042> |    READ STORM    |    Filename: C:\Users\DPham\AppD
00043> |                  |              ata\Local\Temp\
00044> |                  |              10fc3edb-a74b-4f10-8c03-341fce89bc9e\5686701d
00045> | Ptotal= 72.52 mm |    Comments: 10 Year 12 hr 5 min SCS Type II CC
00046> --------------------
00047>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
00048>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
00049>                  0.00    1.81 |  3.08    2.90 |  6.17   13.03 |  9.25    2.53
00050>                  0.08    1.81 |  3.17    2.90 |  6.25   13.03 |  9.33    2.53
00051>                  0.17    1.81 |  3.25    2.90 |  6.33   13.03 |  9.42    2.53
00052>                  0.25    1.81 |  3.33    2.90 |  6.42   13.03 |  9.50    2.53
00053>                  0.33    1.81 |  3.42    2.90 |  6.50    5.79 |  9.58    2.53
00054>                  0.42    1.81 |  3.50    2.90 |  6.58    5.79 |  9.67    2.53
00055>                  0.50    1.81 |  3.58    2.90 |  6.67    5.79 |  9.75    2.53
00056>                  0.58    1.81 |  3.67    2.90 |  6.75    5.79 |  9.83    2.53
00057>                  0.67    1.81 |  3.75    2.90 |  6.83    5.79 |  9.92    2.53
00058>                  0.75    1.81 |  3.83    2.90 |  6.92    5.79 | 10.00    1.45
00059>                  0.83    1.81 |  3.92    2.90 |  7.00    4.34 | 10.08    1.45
00060>                  0.92    1.81 |  4.00    4.34 |  7.08    4.34 | 10.17    1.45
00061>                  1.00    1.81 |  4.08    4.34 |  7.17    4.34 | 10.25    1.45
00062>                  1.08    1.81 |  4.17    4.34 |  7.25    4.34 | 10.33    1.45
00063>                  1.17    1.81 |  4.25    4.34 |  7.33    4.34 | 10.42    1.45
00064>                  1.25    1.81 |  4.33    4.34 |  7.42    4.34 | 10.50    1.45
00065>                  1.33    1.81 |  4.42    4.34 |  7.50    4.34 | 10.58    1.45
00066>                  1.42    1.81 |  4.50    5.79 |  7.58    4.34 | 10.67    1.45
00067>                  1.50    1.81 |  4.58    5.79 |  7.67    4.34 | 10.75    1.45
00068>                  1.58    1.81 |  4.67    5.79 |  7.75    4.34 | 10.83    1.45
00069>                  1.67    1.81 |  4.75    5.79 |  7.83    4.34 | 10.92    1.45
00070>                  1.75    1.81 |  4.83    5.79 |  7.92    4.34 | 11.00    1.45
00071>                  1.83    1.81 |  4.92    5.79 |  8.00    2.53 | 11.08    1.45
00072>                  1.92    1.81 |  5.00    8.69 |  8.08    2.53 | 11.17    1.45
00073>                  2.00    2.17 |  5.08    8.69 |  8.17    2.53 | 11.25    1.45
00074>                  2.08    2.17 |  5.17    8.69 |  8.25    2.53 | 11.33    1.45
00075>                  2.17    2.17 |  5.25    8.69 |  8.33    2.53 | 11.42    1.45
00076>                  2.25    2.17 |  5.33    8.69 |  8.42    2.53 | 11.50    1.45
00077>                  2.33    2.17 |  5.42    8.69 |  8.50    2.53 | 11.58    1.45
00078>                  2.42    2.17 |  5.50   34.75 |  8.58    2.53 | 11.67    1.45
00079>                  2.50    2.17 |  5.58   34.75 |  8.67    2.53 | 11.75    1.45
00080>                  2.58    2.17 |  5.67   34.75 |  8.75    2.53 | 11.83    1.45
00081>                  2.67    2.17 |  5.75   95.56 |  8.83    2.53 | 11.92    1.45
00082>                  2.75    2.17 |  5.83   95.56 |  8.92    2.53 | 12.00    1.45
00083>                  2.83    2.17 |  5.92   95.56 |  9.00    2.53 |
00084>                  2.92    2.17 |  6.00   13.03 |  9.08    2.53 |
00085>                  3.00    2.90 |  6.08   13.03 |  9.17    2.53 |
00086>
00087> --------------------------------------------------------------------------------
00088>
00089> --------------------
00090> | CALIB            |
00091> | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
00092> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
00093> --------------------   U.H. Tp(hrs)=   0.47
00094>
00095>      Unit Hyd Qpeak  (cms)=   3.502
00096>
00097>      PEAK FLOW       (cms)=   2.259 (i)
00098>      TIME TO PEAK    (hrs)=   6.333
00099>      RUNOFF VOLUME    (mm)=  31.709
00100>      TOTAL RAINFALL   (mm)=  72.519
00101>      RUNOFF COEFFICIENT   =   0.437
00102>
00103>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00104>
00105> --------------------------------------------------------------------------------
00106> --------------------
00107> | CALIB            |
00108> | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
00109> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
00110> --------------------   U.H. Tp(hrs)=   0.46
00111>
00112>      Unit Hyd Qpeak  (cms)=   4.557
00113>
00114>      PEAK FLOW       (cms)=   2.919 (i)
00115>      TIME TO PEAK    (hrs)=   6.333
00116>      RUNOFF VOLUME    (mm)=  31.633
00117>      TOTAL RAINFALL   (mm)=  72.519
00118>      RUNOFF COEFFICIENT   =   0.436
00119>
00120>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00121>
00122> --------------------------------------------------------------------------------
00123>
00124> --------------------
00125> | ADD HYD  ( 50010)|
00126> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00127> --------------------          (ha)    (cms)    (hrs)     (mm)
00128>         ID1= 1 ( 40010):    43.09   2.259     6.33    31.71
00129>       + ID2= 2 ( 40030):    54.88   2.919     6.33    31.63
00130>         ================================================
00131>         ID = 3 ( 50010):    97.97   5.179     6.33    31.67
00132>
00133>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00134> --------------------------------------------------------------------------------
00135> --------------------
00136> | ROUTE CHN( 60010)|
00137> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00138> --------------------
00139>                 <------ DATA FOR SECTION (   1.1) ------>
00140>                 Distance      Elevation       Manning
00141>                    0.00         160.98        0.0450
00142>                   10.00         160.83        0.0450
00143>                   20.00         160.72        0.0450
00144>                   30.00         160.67        0.0450
00145>                   40.00         160.61        0.0450
00146>                   50.00         160.60        0.0450
00147>                   60.00         160.55        0.0450
00148>                   70.00         160.65        0.0450
00149>                   80.00         159.78        0.0450
00150>                   90.00         157.33    0.0450 /0.0350  Main Channel
00151>                  100.00         157.18        0.0350      Main Channel
00152>                  110.00         158.55        0.0450
00153>                  120.00         160.34        0.0450
00154>                  130.00         160.29        0.0450
00155>                  140.00         160.30        0.0450
00156>                  150.00         160.38        0.0450
00157>                  160.00         160.53        0.0450
00158>                  170.00         160.58        0.0450
00159>                  180.00         160.51        0.0450
00160>                  190.00         160.53        0.0450
00161>
00162>       <---------------------- TRAVEL TIME TABLE ---------------------->
00163>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00164>          (m)     (m)    (cu.m.)      (cms)        (m/s)      (min)
00165>         0.15  157.33   .123E+04        0.4          0.43      57.39
00166>         0.32  157.50   .422E+04        2.5          0.88      27.82
00167>         0.49  157.67   .768E+04        6.3          1.20      20.47
00168>         0.66  157.83   .116E+05       11.5          1.45      16.89
00169>         0.83  158.00   .160E+05       18.2          1.67      14.70
00170>         0.99  158.17   .209E+05       26.5          1.86      13.18
00171>         1.16  158.34   .263E+05       36.3          2.03      12.06
00172>         1.33  158.51   .321E+05       47.9          2.19      11.18
00173>         1.50  158.68   .384E+05       62.7          2.40      10.21
00174>         1.67  158.84   .451E+05       79.9          2.60       9.41
00175>         1.84  159.01   .522E+05       99.0          2.79       8.79
00176>         2.00  159.18   .597E+05      120.2          2.96       8.28
00177>         2.17  159.35   .676E+05      143.3          3.11       7.86
00178>         2.34  159.52   .759E+05      168.5          3.26       7.51
00179>         2.51  159.69   .846E+05      195.8          3.40       7.20
00180>         2.68  159.86   .938E+05      224.4          3.52       6.97
00181>         2.85  160.02   .104E+06      254.6          3.61       6.78
00182>         3.02  160.19   .114E+06      287.5          3.70       6.62
00183>         3.18  160.36   .127E+06      315.8          3.64       6.72
00184>
00185>                                    <---- hydrograph ---->   <-pipe / channel->
00186>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
00187>                                (ha)    (cms)    (hrs)   (mm)      (m)      (m/s)
00188>    INFLOW : ID= 2 ( 50010)    97.97    5.18     6.33  31.67      0.44      1.08
00189>    OUTFLOW: ID= 1 ( 60010)    97.97    4.15     6.67  31.66      0.39      0.99
00190>
00191>
00192>
00193> --------------------------------------------------------------------------------
00194> --------------------
00195> | CALIB            |
00196> | STANDHYD ( 40020)|   Area     (ha)=  51.32
00197> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
00198> --------------------
00199>                                    IMPERVIOUS    PERVIOUS (i)
00200>      Surface Area      (ha)=         33.87          17.45
00201>      Dep. Storage      (mm)=          2.00           6.20
00202>      Average Slope      (%)=          1.30           1.30
00203>      Length             (m)=        584.91          50.00
00204>      Mannings n             =         0.015          0.290
00205>
00206>      Max.Eff.Inten.(mm/hr)=         95.56          78.46
00207>                    over (min)         10.00          20.00
00208>      Storage Coeff.  (min)=          7.56 (ii)      18.62 (ii)
00209>      Unit Hyd. Tpeak (min)=         10.00          20.00
00210>      Unit Hyd. peak  (cms)=          0.13           0.06
00211>                                                          *TOTALS*
00212>      PEAK FLOW       (cms)=          6.53           2.01          7.943 (iii)
00213>      TIME TO PEAK    (hrs)=          6.00           6.17           6.00
00214>      RUNOFF VOLUME    (mm)=         70.52          38.76          56.55
00215>      TOTAL RAINFALL   (mm)=         72.52          72.52          72.52
00216>      RUNOFF COEFFICIENT   =          0.97           0.53           0.78
00217>
00218>
00219>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
00220>            CN*  =  79.5    Ia = Dep. Storage  (Above)
00221>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
00222>            THAN THE STORAGE COEFFICIENT.
00223>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00224>
00225> --------------------------------------------------------------------------------
00226>
00227> --------------------
00228> | ADD HYD  ( 50020)|
00229> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00230> --------------------          (ha)    (cms)    (hrs)     (mm)
00231>         ID1= 1 ( 40020):    51.32   7.943     6.00    56.55
00232>       + ID2= 2 ( 60010):    97.97   4.151     6.67    31.66
00233>         ================================================
00234>         ID = 3 ( 50020):   149.29   8.629     6.08    40.22
00235>
00236>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00237> --------------------------------------------------------------------------------
00238> --------------------
00239> | ROUTE CHN( 60020)|
00240> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00241> --------------------
00242>                 <------ DATA FOR SECTION (   1.1) ------>
00243>                 Distance      Elevation       Manning
00244>                    0.00         153.66        0.0450
00245>                    1.00         153.24        0.0450
00246>                    2.00         152.95        0.0450
00247>                    3.00         152.70        0.0450
00248>                    4.00         152.40        0.0450
00249>                    5.00         152.09        0.0450
00250>                    6.00         151.83        0.0450
00251>                    7.00         151.60        0.0450
00252>                    8.00         151.49    0.0450 /0.0350  Main Channel
00253>                    9.00         151.42        0.0350      Main Channel
00254>                   10.00         151.38        0.0350      Main Channel
00255>                   11.00         151.40        0.0350      Main Channel
00256>                   12.00         151.38        0.0350      Main Channel
00257>                   13.00         151.38        0.0350      Main Channel
00258>                   14.00         151.38        0.0350      Main Channel
00259>                   15.00         151.50    0.0350 /0.0450  Main Channel
00260>                   16.00         151.56        0.0450
00261>                   17.00         151.60        0.0450
00262>                   25.00         153.59        0.0450
00263>                   26.00         153.63        0.0450
00264>
00265>       <---------------------- TRAVEL TIME TABLE ---------------------->
00266>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00267>          (m)     (m)    (cu.m.)      (cms)        (m/s)      (min)
00268>         0.12  151.49   .140E+03        0.2          0.36      10.54
00269>         0.23  151.60   .355E+03        0.9          0.58       6.57
00270>         0.34  151.72   .624E+03        2.0          0.74       5.11
00271>         0.45  151.83   .916E+03        3.6          0.89       4.27
00272>         0.57  151.94   .123E+04        5.5          1.02       3.73
00273>         0.68  152.05   .157E+04        7.8          1.13       3.35
00274>         0.79  152.17   .193E+04       10.5          1.24       3.06
00275>         0.90  152.28   .231E+04       13.6          1.34       2.83
00276>         1.02  152.39   .271E+04       17.1          1.43       2.65
00277>         1.13  152.50   .314E+04       20.9          1.52       2.50
00278>         1.24  152.62   .358E+04       25.2          1.60       2.37
00279>         1.35  152.73   .405E+04       29.8          1.67       2.26
00280>         1.47  152.84   .454E+04       34.9          1.75       2.17
00281>         1.58  152.95   .505E+04       40.3          1.81       2.09
00282>         1.69  153.07   .558E+04       46.2          1.88       2.01
00283>         1.80  153.18   .614E+04       52.6          1.95       1.95
00284>         1.92  153.29   .672E+04       59.4          2.01       1.88
00285>         2.03  153.40   .731E+04       66.7          2.07       1.83
00286>         2.14  153.52   .793E+04       74.5          2.14       1.77
00287>
00288>                                    <---- hydrograph ---->   <-pipe / channel->
00289>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
00290>                                (ha)    (cms)    (hrs)   (mm)      (m)      (m/s)
00291>    INFLOW : ID= 2 ( 50020)   149.29    8.63     6.08  40.22      0.71      1.16
00292>    OUTFLOW: ID= 1 ( 60020)   149.29    8.64     6.08  40.22      0.71      1.16
00293>
00294>
00295>
00296> --------------------------------------------------------------------------------
00297> --------------------
00298> | CALIB            |
00299> | STANDHYD ( 40040)|   Area     (ha)=  70.68
00300> |ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
00301> --------------------
00302>                                    IMPERVIOUS    PERVIOUS (i)
00303>      Surface Area      (ha)=         52.31          18.38
00304>      Dep. Storage      (mm)=          2.00           6.00
00305>      Average Slope      (%)=          1.20           1.20
00306>      Length             (m)=        686.45          52.00
```

```
00307>      Mannings n          =      0.015        0.280
00308>
00309>      Max.Eff.Inten.(mm/hr)=      95.56       101.22
00310>                 over (min)       10.00        20.00
00311>      Storage Coeff.  (min)=       8.53 (ii)   18.78 (ii)
00312>      Unit Hyd. Tpeak (min)=      10.00        20.00
00313>      Unit Hyd. peak  (cms)=       0.12         0.06
00314>                                                          *TOTALS*
00315>      PEAK FLOW       (cms)=       9.31         2.74        11.267 (iii)
00316>      TIME TO PEAK    (hrs)=       6.00         6.17         6.00
00317>      RUNOFF VOLUME    (mm)=      70.52        42.25        59.21
00318>      TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
00319>      RUNOFF COEFFICIENT   =       0.97         0.58         0.82
00320>
00321>
00322>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
00323>            CN*  =  79.4    Ia = Dep. Storage  (Above)
00324>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
00325>            THAN THE STORAGE COEFFICIENT.
00326>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00327>
00328> ---------------------------------------------------------------------------
00329>
00330> --------------------
00331> | ADD HYD  ( 50220)|
00332> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00333> --------------------          (ha)    (cms)    (hrs)     (mm)
00334>        ID1= 1 ( 40040):    70.68  11.267     6.00    59.21
00335>      + ID2= 2 ( 60020):   149.29   8.643     6.08    40.22
00336>        ==========================================================
00337>        ID = 3 ( 50220):   219.97  19.560     6.08    46.32
00338>
00339>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00340> ---------------------------------------------------------------------------
00341> --------------------
00342> | RESERVOIR( 70010)|     OVERFLOW IS ON
00343> | IN= 2---> OUT= 1 |
00344> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
00345> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
00346>                            0.0000      0.0000   |    3.4010      4.4390
00347>                            0.0530      0.4910   |    4.8380      5.0560
00348>                            0.0890      0.7040   |    5.8470      5.5380
00349>                            0.2040      1.0890   |    6.5980      5.9190
00350>                            0.3240      1.4800   |    7.2560      6.2250
00351>                            0.3890      1.7490   |    7.9030      6.4820
00352>                            0.4470      1.9970   |    8.4910      6.6820
00353>                            0.5090      2.3490   |   12.0680      7.1150
00354>                            0.7420      2.9150   |   20.0000      7.2000
00355>                            1.7580      3.6690   |    0.0000      0.0000
00356>
00357>                                AREA     QPEAK     TPEAK       R.V.
00358>                                (ha)     (cms)     (hrs)       (mm)
00359>    INFLOW : ID= 2 ( 50220)    219.973     19.560      6.08      46.32
00360>    OUTFLOW: ID= 1 ( 70010)    219.973      5.152      7.17      46.30
00361>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
00362>
00363>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =      0
00364>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =   0.00
00365>                    PERCENTAGE OF TIME OVERFLOWING   (%) =   0.00
00366>
00367>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 26.34
00368>                    TIME SHIFT OF PEAK FLOW          (min)= 65.00
00369>                    MAXIMUM  STORAGE   USED       (ha.m.)=  5.2064
00370>
00371> ---------------------------------------------------------------------------
00372>
00373>   --------------------------
00374>   | Junction Command(70011) |
00375>   --------------------------
00376>
00377>                             AREA     QPEAK   TPEAK     R.V.
00378>                             (ha)     (cms)    (hrs)    (mm)
00379>   INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
00380>   OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00
00381>
00382>   ---------------------------------------------------------------------------
00383>
00384> --------------------
00385> | ADD HYD  ( 70012)|
00386> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00387> --------------------          (ha)    (cms)    (hrs)     (mm)
00388> *** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
00389> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
00390>        ID1= 1 ( 70010):   219.97   5.152     7.17    46.30
00391>      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
00392>        ==========================================================
00393>        ID = 3 ( 70012):   219.97   5.152     7.17    46.30
00394>
00395>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00396> ---------------------------------------------------------------------------
00397> --------------------
00398> | ROUTE CHN( 60040)|
00399> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00400> --------------------
00401>               <------ DATA FOR SECTION (   1.1) ------>
00402>               Distance      Elevation       Manning
00403>                   0.00        148.49        0.0450
00404>                   3.00        148.12        0.0450
00405>                   6.00        148.07        0.0450
00406>                   9.00        147.63        0.0450
00407>                  12.00        147.56        0.0450
00408>                  15.00        147.55        0.0450
00409>                  18.00        147.46        0.0450
00410>                  21.00        147.41        0.0450
00411>                  24.00        147.36        0.0450
00412>                  27.00        147.38        0.0450
00413>                  30.00        147.22        0.0450
00414>                  33.00        147.00        0.0450
00415>                  36.00        146.34        0.0450
00416>                  39.00        145.57        0.0350      Main Channel
00417>                  42.00        145.39        0.0350      Main Channel
00418>                  45.00        145.66        0.0350      Main Channel
00419>                  48.00        146.68        0.0450
00420>                  51.00        147.50        0.0450
00421>                  55.00        148.22        0.0450
00422>                  60.00        148.42        0.0450
00423>
00424>       <---------------------- TRAVEL TIME TABLE ---------------------->
00425>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00426>         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
00427>        0.09   145.48    .145E+03        0.0         0.25       83.65
00428>        0.18   145.57    .581E+03        0.2         0.40       52.70
00429>        0.35   145.74    .189E+04        1.1         0.73       29.09
00430>        0.52   145.91    .348E+04        2.7         0.99       21.52
00431>        0.68   146.07    .532E+04        5.0         1.19       17.84
00432>        0.85   146.24    .740E+04        7.9         1.36       15.60
00433>        1.02   146.41    .973E+04       11.5         1.51       14.07
00434>        1.19   146.58    .123E+05       15.9         1.64       12.94
00435>        1.35   146.74    .152E+05       21.2         1.78       11.93
00436>        1.52   146.91    .183E+05       27.8         1.94       10.99
00437>        1.69   147.08    .218E+05       35.0         2.05       10.39
00438>        1.86   147.25    .259E+05       43.0         2.12       10.03
00439>        2.02   147.41    .309E+05       50.6         2.09       10.18
00440>        2.19   147.58    .383E+05       61.5         2.05       10.37
00441>        2.36   147.75    .474E+05       77.1         2.07       10.25
00442>        2.52   147.91    .571E+05       95.6         2.14        9.95
00443>        2.69   148.08    .672E+05      116.0         2.20        9.65
00444>        2.86   148.25    .783E+05      138.1         2.25        9.45
00445>        3.03   148.42    .904E+05      163.4         2.31        9.22
00446>
00447>                                    <---- hydrograph ---->   <-pipe / channel->
00448>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
00449>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
00450>    INFLOW : ID= 2 ( 70012)  219.97     5.15    7.17  46.30      0.69      1.20
00451>    OUTFLOW: ID= 1 ( 60040)  219.97     5.00    7.42  46.30      0.68      1.19
00452>
00453>
00454>
00455> ---------------------------------------------------------------------------
00456> --------------------
00457> | CALIB            |
00458> | STANDHYD ( 40050)|   Area    (ha)=  52.28
00459> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
00460> --------------------
00461>                                IMPERVIOUS    PERVIOUS (i)
00462>      Surface Area     (ha)=      32.94        19.34
00463>      Dep. Storage     (mm)=       2.00         6.30
00464>      Average Slope     (%)=       3.30         3.30
00465>      Length            (m)=     590.36        68.00
00466>      Mannings n          =      0.015        0.270
00467>
00468>      Max.Eff.Inten.(mm/hr)=      95.56        94.87
00469>                 over (min)       5.00        15.00
00470>      Storage Coeff.  (min)=       5.75 (ii)   14.68 (ii)
00471>      Unit Hyd. Tpeak (min)=       5.00        15.00
00472>      Unit Hyd. peak  (cms)=       0.20         0.08
00473>                                                          *TOTALS*
00474>      PEAK FLOW       (cms)=       6.47         3.00         9.090 (iii)
00475>      TIME TO PEAK    (hrs)=       6.00         6.08         6.00
00476>      RUNOFF VOLUME    (mm)=      70.52        41.84        55.90
00477>      TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
00478>      RUNOFF COEFFICIENT   =       0.97         0.58         0.77
00479>
00480>
00481>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
00482>            CN*  =  81.3    Ia = Dep. Storage  (Above)
00483>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
00484>            THAN THE STORAGE COEFFICIENT.
00485>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00486>
00487> ---------------------------------------------------------------------------
00488>
00489> --------------------
00490> | ADD HYD  ( 50040)|
00491> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00492> --------------------          (ha)    (cms)    (hrs)     (mm)
00493>        ID1= 1 ( 40050):    52.28   9.090     6.00    55.90
00494>      + ID2= 2 ( 60040):   219.97   5.003     7.42    46.30
00495>        ==========================================================
00496>        ID = 3 ( 50040):   272.25   9.319     6.00    48.14
00497>
00498>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00499> ---------------------------------------------------------------------------
00500> --------------------
00501> | ROUTE CHN( 60050)|
00502> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00503> --------------------
00504>               <------ DATA FOR SECTION (   1.1) ------>
00505>               Distance      Elevation       Manning
00506>                   0.00        146.35        0.0450
00507>                  16.00        145.17        0.0450
00508>                  18.00        144.62        0.0450
00509>                  20.00        143.50        0.0450
00510>                  26.00        141.63        0.0350      Main Channel
00511>                  30.00        142.17        0.0350      Main Channel
00512>                  34.00        144.28        0.0450
00513>                  38.00        145.27        0.0450
00514>                  50.00        146.42        0.0450
00515>
00516>       <---------------------- TRAVEL TIME TABLE ---------------------->
00517>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00518>         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
00519>        0.25   141.88    .129E+03        0.2         0.54       12.17
00520>        0.50   142.13    .516E+03        1.1         0.86        7.67
00521>        0.74   142.38    .111E+04        3.4         1.21        5.42
00522>        0.99   142.63    .184E+04        7.0         1.50        4.37
00523>        1.24   142.87    .269E+04       11.9         1.75        3.76
00524>        1.49   143.12    .366E+04       18.2         1.96        3.36
00525>        1.74   143.37    .476E+04       25.9         2.15        3.06
00526>        1.98   143.62    .597E+04       35.3         2.33        2.82
00527>        2.23   143.87    .729E+04       46.5         2.52        2.61
00528>        2.48   144.11    .869E+04       59.3         2.69        2.44
00529>        2.73   144.36    .102E+05       74.3         2.88        2.28
00530>        2.97   144.61    .118E+05       92.4         3.09        2.13
00531>        3.22   144.86    .136E+05      111.6         3.24        2.03
00532>        3.47   145.11    .156E+05      133.1         3.37        1.95
00533>        3.72   145.35    .178E+05      152.6         3.38        1.94
00534>        3.97   145.60    .206E+05      175.6         3.37        1.95
00535>        4.21   145.85    .239E+05      204.3         3.37        1.95
00536>        4.46   146.10    .279E+05      238.6         3.38        1.95
00537>        4.71   146.35    .324E+05      279.0         3.40        1.93
00538>
00539>                                    <---- hydrograph ---->   <-pipe / channel->
00540>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
00541>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
00542>    INFLOW : ID= 2 ( 50040)  272.25     9.32    6.00  48.14      1.11      1.61
00543>    OUTFLOW: ID= 1 ( 60050)  272.25     8.48    6.00  48.14      1.06      1.57
00544>
00545>
00546>
00547> ---------------------------------------------------------------------------
00548> --------------------
00549> | ROUTE CHN( 60060)|
00550> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00551> --------------------
00552>               <------ DATA FOR SECTION (   1.1) ------>
00553>               Distance      Elevation       Manning
00554>                   0.00        142.52        0.0450
00555>                   2.00        142.41        0.0450
00556>                   4.00        142.26        0.0450
00557>                   6.00        142.08        0.0450
00558>                   8.00        141.85        0.0450
00559>                  10.00        141.61        0.0450
00560>                  12.00        141.38        0.0450
00561>                  14.00        141.11        0.0450
00562>                  16.00        140.93        0.0450
00563>                  18.00        140.83        0.0450
00564>                  20.00        140.73        0.0350      Main Channel
00565>                  22.00        140.55        0.0350      Main Channel
00566>                  24.00        140.49        0.0350      Main Channel
00567>                  26.00        140.65        0.0350      Main Channel
00568>                  28.00        141.04        0.0450
00569>                  30.00        141.72        0.0450
00570>                  32.00        142.19        0.0450
00571>                  40.00        142.50        0.0450
00572>
00573>       <---------------------- TRAVEL TIME TABLE ---------------------->
00574>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00575>         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
00576>        0.08   140.57    .466E+02        0.0         0.23       24.59
00577>        0.15   140.65    .155E+03        0.2         0.38       14.98
00578>        0.23   140.73    .305E+03        0.5         0.51       11.12
00579>        0.34   140.84    .598E+03        1.2         0.68        8.29
00580>        0.45   140.95    .995E+03        2.3         0.80        7.09
00581>        0.56   141.06    .147E+04        3.9         0.91        6.22
00582>        0.68   141.17    .201E+04        6.1         1.04        5.45
00583>        0.79   141.28    .259E+04        8.8         1.16        4.89
00584>        0.90   141.39    .321E+04       12.0         1.27        4.47
00585>        1.01   141.50    .389E+04       15.6         1.36        4.16
00586>        1.12   141.61    .461E+04       19.7         1.45        3.90
00587>        1.23   141.72    .537E+04       24.3         1.54        3.69
00588>        1.34   141.84    .619E+04       29.4         1.61        3.52
00589>        1.45   141.95    .707E+04       35.0         1.68        3.37
00590>        1.56   142.06    .799E+04       41.1         1.75        3.24
00591>        1.67   142.17    .898E+04       47.8         1.81        3.13
00592>        1.79   142.28    .101E+05       54.6         1.85        3.07
00593>        1.90   142.39    .113E+05       62.1         1.87        3.03
00594>        2.01   142.50    .127E+05       70.3         1.88        3.01
00595>
00596>                                    <---- hydrograph ---->   <-pipe / channel->
00597>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
00598>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
00599>    INFLOW : ID= 2 ( 60050)  272.25     8.48    6.00  48.14      0.77      1.14
00600>    OUTFLOW: ID= 1 ( 60060)  272.25     7.99    6.08  48.14      0.75      1.12
00601>
00602>
00603>
00604> ---------------------------------------------------------------------------
00605> --------------------
00606> | CALIB            |
00607> | STANDHYD ( 40060)|   Area    (ha)=   2.84
00608> |ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
00609> --------------------
00610>                                IMPERVIOUS    PERVIOUS (i)
00611>      Surface Area     (ha)=       0.94         1.90
00612>      Dep. Storage     (mm)=       2.00         7.70
```

```
      Average Slope     (%)=       2.60         2.60
      Length            (m)=     137.56        98.00
      Mannings n           =      0.015        0.320

      Max.Eff.Inten.(mm/hr)=      95.56        55.14
                    over (min)        5.00        20.00
      Storage Coeff.  (min)=       2.58 (ii)   19.01 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.29         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.20         0.18          0.326 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      70.52        38.36          46.80
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.53           0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40060):     2.84   0.326     6.00    46.80
      + ID2= 2 ( 60060):   272.25   7.994     6.08    48.14
        ====================================================
        ID = 3 ( 50070):   275.09   8.213     6.08    48.13

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      26.30        13.55
      Dep. Storage     (mm)=       2.00         5.60
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     515.42        72.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=      95.56        87.78
                    over (min)        5.00        20.00
      Storage Coeff.  (min)=       6.85 (ii)   19.19 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.29         1.73          6.517 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      70.52        41.59          57.21
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.57           0.79

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40080):    39.85   6.517     6.00    57.21
      + ID2= 2 ( 50070):   275.09   8.213     6.08    48.13
        ====================================================
        ID = 3 ( 50080):   314.94  13.814     6.00    49.28

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        141.24        0.0450
                  40.00        140.58        0.0450
                  50.00        140.57        0.0450
                  60.00        140.36        0.0450
                  70.00        140.19        0.0450
                  80.00        140.15        0.0450
                  90.00        139.70        0.0450
                 100.00        139.54        0.0350      Main Channel
                 110.00        139.97        0.0450
                 120.00        140.53        0.0450
                 130.00        140.63        0.0450
                 140.00        140.72        0.0450
                 150.00        140.87        0.0450
                 190.00        141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.09  139.63    .150E+03       0.1         0.18      43.53
        0.17  139.71    .598E+03       0.4         0.30      27.01
        0.26  139.80    .126E+04       1.1         0.42      19.24
        0.34  139.88    .209E+04       2.2         0.52      15.58
        0.43  139.97    .307E+04       3.8         0.60      13.36
        0.51  140.05    .420E+04       6.1         0.70      11.45
        0.60  140.14    .548E+04       9.0         0.79      10.19
        0.68  140.22    .714E+04      11.3         0.76      10.55
        0.77  140.31    .919E+04      15.7         0.82       9.77
        0.85  140.39    .115E+05      21.0         0.88       9.11
        0.94  140.48    .141E+05      27.4         0.94       8.54
        1.02  140.56    .169E+05      34.6         0.99       8.12
        1.11  140.65    .205E+05      41.1         0.97       8.32
        1.19  140.74    .248E+05      51.5         1.00       8.02
        1.28  140.82    .296E+05      64.0         1.04       7.70
        1.36  140.91    .348E+05      78.0         1.08       7.44
        1.45  140.99    .407E+05      93.6         1.11       7.24
        1.53  141.08    .472E+05     111.7         1.14       7.05
        1.62  141.16    .545E+05     132.2         1.17       6.87

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94   13.81    6.00  49.28      0.73      0.80
   OUTFLOW: ID= 1 ( 60080)  314.94   11.00    6.17  49.28      0.67      0.77


--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.99         3.46
      Dep. Storage     (mm)=       2.00         9.68
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     172.19        99.00
      Mannings n           =      0.015        0.370

      Max.Eff.Inten.(mm/hr)=      95.56        37.61
                    over (min)        5.00        25.00
      Storage Coeff.  (min)=       3.02 (ii)   24.55 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.27         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.16         0.23          0.288 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
      RUNOFF VOLUME    (mm)=      70.52        30.88          36.34
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.43           0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40090):     4.45   0.288     6.00    36.34
      + ID2= 2 ( 60080):   314.94  10.998     6.17    49.28
        ====================================================
        ID = 3 ( 50090):   319.39  11.232     6.17    49.10

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        138.71        0.0450
                   4.00        136.97        0.0450
                  28.00        135.94        0.0450
                  32.00        135.79        0.0350      Main Channel
                  36.00        135.23        0.0350      Main Channel
                  40.00        135.71    0.0350 /0.0450  Main Channel
                  54.00        136.96        0.0450
                  80.00        138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.16  135.39    .631E+02       0.1         0.44      12.42
        0.31  135.55    .253E+03       0.5         0.69       7.83
        0.47  135.71    .568E+03       1.6         0.91       5.97
        0.65  135.89    .114E+04       4.2         1.20       4.52
        0.84  136.07    .209E+04       8.7         1.35       4.02
        1.02  136.25    .342E+04      15.4         1.47       3.70
        1.20  136.44    .511E+04      24.8         1.58       3.44
        1.38  136.62    .718E+04      37.2         1.69       3.21
        1.57  136.80    .962E+04      53.1         1.79       3.02
        1.75  136.98    .124E+05      72.7         1.90       2.85
        1.93  137.17    .155E+05      97.8         2.05       2.64
        2.11  137.35    .188E+05     127.1         2.20       2.47
        2.30  137.53    .223E+05     160.4         2.34       2.31
        2.48  137.71    .259E+05     197.8         2.48       2.19
        2.66  137.90    .298E+05     239.5         2.61       2.07
        2.85  138.08    .339E+05     285.4         2.74       1.98
        3.03  138.26    .381E+05     335.6         2.86       1.89
        3.21  138.44    .426E+05     390.3         2.98       1.82
        3.39  138.63    .472E+05     449.4         3.10       1.75

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  319.39   11.23    6.17  49.10      0.91      1.39
   OUTFLOW: ID= 1 ( 60100)  319.39   10.99    6.25  49.10      0.90      1.39


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--------------------
| CALIB              |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      12.46        14.44
      Dep. Storage     (mm)=       2.00         6.20
      Average Slope     (%)=       1.40         1.40
      Length            (m)=     423.45       125.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=      95.56        46.24
                    over (min)        5.00        30.00
      Storage Coeff.  (min)=       6.09 (ii)   28.77 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.19         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.86         1.05          3.390 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33           6.00
      RUNOFF VOLUME    (mm)=      70.52        38.68          52.19
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.53           0.72

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40100):    26.90   3.390     6.00    52.19
      + ID2= 2 ( 60100):   319.39  10.987     6.25    49.10
        ====================================================
        ID = 3 ( 50110):   346.28  12.716     6.17    49.34

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

      Unit Hyd Qpeak  (cms)=   3.961

      PEAK FLOW       (cms)=   2.648 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  33.468
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.462

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

      Unit Hyd Qpeak  (cms)=   4.875

      PEAK FLOW       (cms)=   3.657 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  35.738
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.493

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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                                                    |
 ---------------------                              |
 | ADD HYD  ( 50130)|                               |
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   2.648     6.33    33.47
      + ID2= 2 ( 40130):    63.82   3.657     6.42    35.74
        ==========================================================
        ID = 3 ( 50130):   108.42   6.279     6.33    34.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------------
 ---------------------
 | ROUTE CHN( 60130)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.27        0.0450
                   2.00        155.23        0.0450
                   4.00        155.21        0.0450
                   6.00        155.08        0.0450
                   8.00        154.94        0.0450
                  10.00        154.68        0.0450
                  12.00        154.21        0.0450
                  14.00        153.90        0.0450
                  16.00        153.41        0.0350      Main Channel
                  18.00        153.58        0.0350      Main Channel
                  20.00        153.72    0.0350 /0.0450  Main Channel
                  22.00        153.77        0.0450
                  24.00        153.77        0.0450
                  26.00        153.82        0.0450
                  28.00        153.79        0.0450
                  30.00        153.87        0.0450
                  32.00        153.99        0.0450
                  34.00        154.44        0.0450
                  36.00        154.86        0.0450
                  40.00        155.37        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.10   153.50    .107E+03       0.0        0.27      87.23
        0.20   153.60    .429E+03       0.1        0.42      55.65
        0.29   153.70    .991E+03       0.4        0.55      42.98
        0.39   153.80    .201E+04       0.9        0.66      35.52
        0.49   153.90    .408E+04       2.1        0.71      33.15
        0.59   153.99    .651E+04       3.7        0.81      29.01
        0.69   154.09    .916E+04       6.1        0.93      25.22
        0.79   154.19    .120E+05       8.9        1.05      22.39
        0.88   154.29    .149E+05      12.3        1.16      20.20
        0.98   154.39    .179E+05      16.2        1.27      18.49
        1.08   154.49    .211E+05      20.5        1.37      17.13
        1.18   154.58    .244E+05      25.4        1.47      16.02
        1.28   154.68    .278E+05      30.7        1.56      15.10
        1.37   154.78    .314E+05      36.4        1.63      14.38
        1.47   154.88    .351E+05      42.5        1.71      13.77
        1.57   154.98    .391E+05      48.9        1.76      13.33
        1.67   155.07    .433E+05      55.6        1.81      12.98
        1.77   155.17    .478E+05      63.0        1.86      12.65
        1.86   155.27    .528E+05      69.8        1.86      12.62

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42     6.28    6.33  34.80       0.69       0.94
   OUTFLOW: ID= 1 ( 60130)  108.42     4.77    6.67  34.80       0.63       0.86


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 ---------------------
 | CALIB             |
 | STANDHYD ( 40140)|   Area     (ha)=  65.76
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
 ---------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      46.69         19.07
      Dep. Storage     (mm)=       2.00          6.30
      Average Slope     (%)=       1.30          1.30
      Length            (m)=     662.12         66.00
      Mannings n           =      0.015         0.290

      Max.Eff.Inten.(mm/hr)=      95.56         81.73
                    over (min)        10.00         25.00
      Storage Coeff.  (min)=       8.14 (ii)    21.00 (ii)
      Unit Hyd. Tpeak (min)=       10.00         25.00
      Unit Hyd. peak  (cms)=       0.13          0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       8.92          2.08        10.178 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.25         6.00
      RUNOFF VOLUME    (mm)=      70.52         38.88        58.18
      TOTAL RAINFALL   (mm)=      72.52         72.52        72.52
      RUNOFF COEFFICIENT   =       0.97          0.54         0.80

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 ---------------------
 | ADD HYD  ( 50180)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76  10.178     6.00    58.18
      + ID2= 2 ( 60130):   108.42   4.773     6.67    34.80
        ==========================================================
        ID = 3 ( 50180):   174.18  11.145     6.00    43.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------------
 ---------------------
 | CALIB             |
 | STANDHYD ( 40190)|   Area     (ha)=  13.78
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
 ---------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.74          8.05
      Dep. Storage     (mm)=       2.00          8.12
      Average Slope     (%)=       2.40          2.40
      Length            (m)=     303.13        131.00
      Mannings n           =      0.015         0.350

      Max.Eff.Inten.(mm/hr)=      95.56         31.85
                    over (min)        5.00          35.00
      Storage Coeff.  (min)=       4.24 (ii)    30.57 (ii)
      Unit Hyd. Tpeak (min)=       5.00          35.00
      Unit Hyd. peak  (cms)=       0.24          0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.39          0.43         1.564 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.42         6.00
      RUNOFF VOLUME    (mm)=      70.52         31.43        46.53
      TOTAL RAINFALL   (mm)=      72.52         72.52        72.52
      RUNOFF COEFFICIENT   =       0.97          0.43         0.64

 ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  77.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 ---------------------
 | ROUTE CHN( 60190)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.90        0.0450
                   1.00        154.69        0.0450
                   2.00        154.30        0.0450
                   3.00        154.00    0.0450 /0.0350  Main Channel
                   4.00        153.74        0.0350      Main Channel
                   5.00        153.51        0.0350      Main Channel
                   6.00        153.46        0.0350      Main Channel
                   7.00        153.77        0.0350      Main Channel
                   8.00        154.10    0.0350 /0.0450  Main Channel
                   9.00        154.50        0.0450
                  10.00        154.84        0.0450
                  11.00        155.13        0.0450
                  12.00        155.26        0.0450
                  13.00        155.32        0.0450
                  14.00        155.42        0.0450
                  15.00        155.52        0.0450
                  16.00        155.62        0.0450
                  17.00        155.69        0.0450
                  18.00        155.76        0.0450
                  20.00        155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.11   153.57    .445E+02       0.0        0.32      21.18
        0.22   153.68    .135E+03       0.2        0.51      13.45
        0.33   153.79    .262E+03       0.4        0.66      10.46
        0.43   153.89    .423E+03       0.8        0.79       8.73
        0.54   154.00    .616E+03       1.3        0.90       7.61
        0.68   154.14    .900E+03       2.4        1.09       6.30
        0.81   154.27    .123E+04       3.8        1.27       5.40
        0.95   154.41    .160E+04       5.5        1.42       4.83
        1.08   154.54    .201E+04       7.6        1.55       4.43
        1.22   154.68    .246E+04       9.9        1.67       4.12
        1.35   154.81    .294E+04      12.7        1.78       3.86
        1.48   154.94    .345E+04      15.8        1.88       3.65
        1.62   155.08    .400E+04      19.2        1.97       3.48
        1.75   155.21    .458E+04      22.9        2.05       3.34
        1.89   155.35    .524E+04      26.8        2.11       3.26
        2.02   155.48    .599E+04      31.4        2.16       3.18
        2.16   155.62    .682E+04      36.5        2.20       3.12
        2.29   155.75    .774E+04      41.9        2.23       3.08
        2.43   155.89    .878E+04      48.0        2.25       3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     1.56    6.00  46.53       0.57       0.93
   OUTFLOW: ID= 1 ( 60190)   13.78     1.32    6.00  46.53       0.54       0.89


 ---------------------------------------------------------------------------------
 ---------------------
 | CALIB             |
 | STANDHYD ( 40200)|   Area     (ha)=  22.94
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
 ---------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      17.41         5.53
      Dep. Storage     (mm)=       2.00         6.75
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     391.08       150.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      95.56        39.03
                    over (min)        5.00         30.00
      Storage Coeff.  (min)=       4.62 (ii)    26.62 (ii)
      Unit Hyd. Tpeak (min)=       5.00         30.00
      Unit Hyd. peak  (cms)=       0.22         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.44         0.35         4.612 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33         6.00
      RUNOFF VOLUME    (mm)=      70.52        33.83        61.25
      TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
      RUNOFF COEFFICIENT   =       0.97         0.47         0.84

 ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  ( 50200)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40180):    13.89   2.731     6.00    61.14
      + ID2= 2 ( 40200):    22.94   4.612     6.00    61.25
        ==========================================================
        ID = 3 ( 50200):    36.83   7.343     6.00    61.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  ( 50200)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50200):    36.83   7.343     6.00    61.21
      + ID2= 2 ( 60190):    13.78   1.323     6.00    46.53
        ==========================================================
        ID = 1 ( 50200):    50.61   8.666     6.00    57.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------------
 ---------------------
 | CALIB             |
 | STANDHYD ( 40210)|   Area     (ha)=   6.07
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
 ---------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.01         1.06
      Dep. Storage     (mm)=       2.00         6.27
      Average Slope     (%)=       0.90         0.90
      Length            (m)=     201.21       118.00
```

```
      Mannings n           =      0.015        0.290
 
      Max.Eff.Inten.(mm/hr)=      95.56        34.04
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       4.45 (ii)   33.32 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.23         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.29         0.06          1.313 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      70.52        33.69         63.80
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.46          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40210):     6.07   1.313     6.00    63.80
      + ID2= 2 ( 50200):    50.61   8.666     6.00    57.21
        ================================================
        ID = 3 ( 50210):    56.68   9.979     6.00    57.92

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        152.62        0.0450
                    7.00        152.39        0.0450
                    8.00        152.02        0.0450
                    9.00        151.48        0.0450
                   10.00        151.01        0.0450
                   11.00        150.56    0.0450 /0.0350  Main Channel
                   12.00        150.38        0.0350      Main Channel
                   13.00        150.40        0.0350      Main Channel
                   14.00        150.36        0.0350      Main Channel
                   15.00        150.60    0.0350 /0.0450  Main Channel
                   16.00        150.99        0.0450
                   17.00        151.50        0.0450
                   18.00        151.91        0.0450
                   19.00        152.65        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.10   150.46    .580E+02       0.1         0.30      17.06
        0.20   150.56    .160E+03       0.3         0.48      10.57
        0.32   150.68    .314E+03       0.7         0.70       7.18
        0.44   150.80    .489E+03       1.4         0.89       5.71
        0.56   150.92    .686E+03       2.3         1.03       4.89
        0.69   151.04    .904E+03       3.5         1.16       4.35
        0.81   151.16    .114E+04       4.8         1.28       3.95
        0.93   151.29    .140E+04       6.4         1.38       3.66
        1.05   151.41    .167E+04       8.1         1.48       3.42
        1.17   151.53    .196E+04      10.1         1.57       3.22
        1.29   151.65    .227E+04      12.3         1.65       3.06
        1.41   151.77    .260E+04      14.8         1.73       2.93
        1.54   151.89    .295E+04      17.5         1.80       2.81
        1.66   152.01    .331E+04      20.4         1.87       2.70
        1.78   152.13    .369E+04      23.6         1.94       2.61
        1.90   152.26    .409E+04      27.0         2.00       2.52
        2.02   152.38    .451E+04      30.7         2.06       2.45
        2.14   152.50    .500E+04      33.4         2.03       2.49
        2.26   152.62    .563E+04      37.3         2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50210)    56.68     9.98    6.00  57.92      1.16      1.56
   OUTFLOW: ID= 1 ( 60210)    56.68     9.56    6.00  57.92      1.14      1.54


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area     (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.91         2.40
      Dep. Storage     (mm)=       2.00         6.17
      Average Slope     (%)=       0.60         0.60
      Length            (m)=     274.66        79.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      95.56        39.61
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       6.06 (ii)   30.18 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.19         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.21         0.14          2.267 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      70.52        34.37         62.48
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.47          0.86


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40220):    11.32   2.267     6.00    62.48
      + ID2= 2 ( 60210):    56.68   9.563     6.00    57.92
        ================================================
        ID = 3 ( 50120):    68.00  11.830     6.00    58.68

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50120):    68.00  11.830     6.00    58.68
      + ID2= 2 ( 50180):   174.18  11.145     6.00    43.63
        ================================================
        ID = 3 ( 50140):   242.18  22.974     6.00    47.85

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        152.29        0.0450
                    2.00        152.20        0.0450
                    4.00        152.17        0.0450
                    6.00        152.15        0.0450
                    8.00        151.78        0.0450
                   10.00        151.28        0.0450
                   12.00        150.79        0.0450
                   14.00        150.20    0.0450 /0.0350  Main Channel
                   16.00        149.82        0.0350      Main Channel
                   18.00        149.51        0.0350      Main Channel
                   20.00        149.24        0.0350      Main Channel
                   22.00        149.48        0.0350      Main Channel
                   24.00        150.00    0.0350 /0.0450  Main Channel
                   26.00        150.52        0.0450
                   28.00        151.14        0.0450
                   30.00        151.68        0.0450
                   32.00        152.11        0.0450
                   34.00        152.20        0.0450
                   35.00        152.27        0.0450
                   38.00        152.30        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.15   149.39    .694E+02       0.1         0.32      19.63
        0.31   149.54    .273E+03       0.4         0.53      11.92
        0.46   149.70    .577E+03       1.1         0.72       8.87
        0.61   149.85    .972E+03       2.2         0.87       7.30
        0.76   150.00    .145E+04       3.9         1.01       6.26
        0.93   150.16    .205E+04       6.4         1.18       5.36
        1.09   150.33    .274E+04       9.9         1.37       4.62
        1.25   150.49    .350E+04      14.2         1.54       4.11
        1.42   150.65    .434E+04      19.3         1.69       3.75
        1.58   150.82    .524E+04      25.2         1.83       3.47
        1.74   150.98    .621E+04      31.8         1.95       3.26
        1.91   151.14    .726E+04      39.2         2.06       3.09
        2.07   151.31    .839E+04      47.5         2.16       2.94
        2.23   151.47    .959E+04      56.6         2.25       2.82
        2.40   151.63    .109E+05      66.7         2.34       2.72
        2.56   151.80    .122E+05      77.6         2.41       2.63
        2.72   151.96    .137E+05      89.3         2.48       2.55
        2.89   152.12    .153E+05     102.0         2.55       2.49
        3.05   152.29    .172E+05     111.6         2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50140)    242.18    22.97    6.00  47.85      1.52      1.78
   OUTFLOW: ID= 1 ( 60140)    242.18    21.34    6.08  47.85      1.47      1.74


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--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        151.02        0.0450
                    2.00        150.89        0.0450
                    4.00        150.73        0.0450
                    6.00        150.65        0.0450
                    8.00        150.38        0.0450
                   10.00        149.93        0.0450
                   12.00        149.51        0.0450
                   14.00        149.02    0.0450 /0.0350  Main Channel
                   16.00        148.64        0.0350      Main Channel
                   18.00        148.27        0.0350      Main Channel
                   20.00        148.39        0.0350      Main Channel
                   22.00        148.60        0.0350      Main Channel
                   24.00        148.94    0.0350 /0.0450  Main Channel
                   26.00        149.34        0.0450
                   28.00        149.66        0.0450
                   30.00        150.12        0.0450
                   32.00        150.45        0.0450
                   34.00        150.52        0.0450
                   36.00        150.60        0.0450
                   38.00        150.60        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.11   148.38    .283E+02       0.0         0.26      13.34
        0.22   148.49    .107E+03       0.2         0.44       7.98
        0.34   148.60    .226E+03       0.6         0.58       6.07
        0.45   148.72    .380E+03       1.3         0.72       4.90
        0.56   148.83    .563E+03       2.2         0.84       4.20
        0.67   148.94    .775E+03       3.5         0.95       3.72
        0.80   149.07    .105E+04       5.5         1.11       3.17
        0.93   149.20    .136E+04       8.2         1.27       2.77
        1.06   149.32    .170E+04      11.3         1.41       2.50
        1.18   149.45    .207E+04      14.9         1.52       2.31
        1.31   149.58    .248E+04      19.1         1.63       2.17
        1.44   149.71    .292E+04      23.8         1.72       2.05
        1.57   149.83    .340E+04      29.1         1.81       1.95
        1.70   149.96    .391E+04      34.9         1.89       1.87
        1.82   150.09    .445E+04      41.4         1.97       1.79
        1.95   150.22    .502E+04      48.4         2.04       1.73
        2.08   150.35    .563E+04      56.0         2.10       1.67
        2.21   150.47    .628E+04      63.9         2.15       1.64
        2.33   150.60    .702E+04      71.1         2.14       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 60140)    242.18    21.34    6.08  47.85      1.37      1.67
   OUTFLOW: ID= 1 ( 60150)    242.18    21.63    6.08  47.85      1.38      1.68


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--------------------
| CALIB            |
| STANDHYD ( 40150)|   Area     (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.11         2.26
      Dep. Storage     (mm)=       2.00         6.34
      Average Slope     (%)=       2.30         2.30
      Length            (m)=     189.18        45.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      95.56        68.99
                    over (min)        5.00        15.00
      Storage Coeff.  (min)=       3.24 (ii)   12.45 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.27         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.74         0.27          0.972 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      70.52        36.45         54.21
      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
      RUNOFF COEFFICIENT   =       0.97         0.50          0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  80.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40150):     5.37   0.972     6.00    54.21
      + ID2= 2 ( 60150):   242.18  21.626     6.08    47.85
        ================================================
        ID = 3 ( 50160):   247.54  22.132     6.08    47.99

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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01531> ------------------------------------------------------------------------------
01532> --------------------
01533> | CALIB             |
01534> | STANDHYD ( 40240)|   Area    (ha)=  10.28
01535> |ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
01536> --------------------
01537>                              IMPERVIOUS    PERVIOUS (i)
01538>      Surface Area     (ha)=       8.79         1.50
01539>      Dep. Storage     (mm)=       2.00         5.70
01540>      Average Slope     (%)=       3.40         3.40
01541>      Length            (m)=     261.85        70.00
01542>      Mannings n            =      0.015        0.270
01543>
01544>      Max.Eff.Inten.(mm/hr)=      95.56        59.97
01545>                   over (min)        5.00        10.00
01546>      Storage Coeff.  (min)=       3.50 (ii)    7.93 (ii)
01547>      Unit Hyd. Tpeak (min)=       5.00        10.00
01548>      Unit Hyd. peak  (cms)=       0.26         0.13
01549>                                                          *TOTALS*
01550>      PEAK FLOW       (cms)=       2.30         0.19          2.489 (iii)
01551>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
01552>      RUNOFF VOLUME    (mm)=      70.52        34.64          65.09
01553>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
01554>      RUNOFF COEFFICIENT   =       0.97         0.48           0.90
01555>
01556> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01557>
01558>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01559>            CN*  =  79.6    Ia = Dep. Storage  (Above)
01560>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01561>            THAN THE STORAGE COEFFICIENT.
01562>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01563>
01564> ------------------------------------------------------------------------------
01565> --------------------
01566> | CALIB             |
01567> | STANDHYD ( 40250)|   Area    (ha)=  13.36
01568> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
01569> --------------------
01570>                              IMPERVIOUS    PERVIOUS (i)
01571>      Surface Area     (ha)=       8.61         4.75
01572>      Dep. Storage     (mm)=       2.00         7.14
01573>      Average Slope     (%)=       2.00         2.00
01574>      Length            (m)=     298.43        70.00
01575>      Mannings n            =      0.015        0.320
01576>
01577>      Max.Eff.Inten.(mm/hr)=      95.56        53.75
01578>                   over (min)        5.00        20.00
01579>      Storage Coeff.  (min)=       4.44 (ii)   19.12 (ii)
01580>      Unit Hyd. Tpeak (min)=       5.00        20.00
01581>      Unit Hyd. peak  (cms)=       0.23         0.06
01582>                                                          *TOTALS*
01583>      PEAK FLOW       (cms)=       2.18         0.37          2.431 (iii)
01584>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
01585>      RUNOFF VOLUME    (mm)=      70.52        32.78          56.51
01586>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
01587>      RUNOFF COEFFICIENT   =       0.97         0.45           0.78
01588>
01589> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01590>
01591>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01592>            CN*  =  78.7    Ia = Dep. Storage  (Above)
01593>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01594>            THAN THE STORAGE COEFFICIENT.
01595>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01596>
01597> ------------------------------------------------------------------------------
01598> --------------------
01599> | ROUTE CHN( 60240)|
01600> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01601> --------------------
01602>                <------ DATA FOR SECTION (   1.1) ------>
01603>                Distance      Elevation       Manning
01604>                    0.00         155.56        0.0450
01605>                    2.00         155.23        0.0450
01606>                    4.00         154.58        0.0450
01607>                    6.00         153.92        0.0450
01608>                    8.00         153.53        0.0450
01609>                   10.00         152.64        0.0450
01610>                   12.00         152.43    0.0450 /0.0350  Main Channel
01611>                   14.00         152.24        0.0350      Main Channel
01612>                   16.00         152.07        0.0350      Main Channel
01613>                   18.00         152.30    0.0350 /0.0450  Main Channel
01614>                   20.00         152.46        0.0450
01615>                   22.00         155.55        0.0450
01616>
01617>       <---------------------- TRAVEL TIME TABLE ----------------------->
01618>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01619>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01620>         0.12   152.18    .895E+02       0.1         0.43       24.33
01621>         0.24   152.30    .356E+03       0.4         0.69       15.20
01622>         0.43   152.49    .118E+04       2.1         1.10        9.55
01623>         0.62   152.68    .234E+04       5.5         1.48        7.09
01624>         0.81   152.88    .361E+04      10.4         1.83        5.76
01625>         1.00   153.07    .494E+04      16.7         2.13        4.94
01626>         1.19   153.26    .634E+04      24.2         2.40        4.38
01627>         1.38   153.45    .781E+04      32.8         2.65        3.97
01628>         1.58   153.64    .936E+04      42.5         2.86        3.67
01629>         1.77   153.83    .110E+05      53.3         3.05        3.45
01630>         1.96   154.02    .128E+05      65.6         3.23        3.26
01631>         2.15   154.21    .147E+05      79.4         3.40        3.09
01632>         2.34   154.40    .167E+05      94.5         3.57        2.95
01633>         2.53   154.60    .188E+05     111.0         3.73        2.82
01634>         2.72   154.79    .209E+05     128.7         3.89        2.71
01635>         2.91   154.98    .231E+05     147.8         4.03        2.61
01636>         3.10   155.17    .255E+05     168.3         4.17        2.52
01637>         3.30   155.36    .279E+05     189.2         4.28        2.46
01638>         3.49   155.55    .305E+05     211.3         4.38        2.40
01639>
01640>                                    <---- hydrograph ---->   <-pipe / channel->
01641>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01642>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01643>    INFLOW : ID= 2 ( 40250)   13.36     2.43    6.00  56.51      0.45      1.13
01644>    OUTFLOW: ID= 1 ( 60240)   13.36     1.91    6.00  56.50      0.41      1.04
01645>
01646>
01647>
01648> ------------------------------------------------------------------------------
01649>
01650> --------------------
01651> | ADD HYD  ( 50250)|
01652> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01653> --------------------         (ha)    (cms)    (hrs)     (mm)
01654>         ID1= 1 ( 40240):    10.28   2.489     6.00    65.09
01655>       + ID2= 2 ( 50160):   247.54  22.132     6.08    47.99
01656>         ==================================================
01657>         ID = 3 ( 50250):   257.83  23.105     6.08    48.67
01658>
01659>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01660> ------------------------------------------------------------------------------
01661>
01662> --------------------
01663> | ADD HYD  ( 50250)|
01664> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
01665> --------------------         (ha)    (cms)    (hrs)     (mm)
01666>         ID1= 3 ( 50250):   257.83  23.105     6.08    48.67
01667>       + ID2= 2 ( 60240):    13.36   1.911     6.00    56.50
01668>         ==================================================
01669>         ID = 1 ( 50250):   271.19  24.920     6.08    49.06
01670>
01671>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01672> ------------------------------------------------------------------------------
01673> --------------------
01674> | ROUTE CHN( 60250)|
01675> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01676> --------------------
01677>                <------ DATA FOR SECTION (   1.1) ------>
01678>                Distance      Elevation       Manning
01679>                    0.00         149.47        0.0450
01680>                    3.00         149.39        0.0450
01681>                    6.00         149.18        0.0450
01682>                    9.00         148.85        0.0450
01683>                   12.00         148.60        0.0450
01684>                   15.00         148.16        0.0450
01685>                   18.00         147.81        0.0450
01686>                   21.00         147.50        0.0450
01687>                   24.00         147.26        0.0350      Main Channel
01688>                   27.00         146.88        0.0350      Main Channel
01689>                   30.00         146.72        0.0350      Main Channel
01690>                   33.00         147.27    0.0350 /0.0450  Main Channel
01691>                   36.00         147.60        0.0450
01692>                   39.00         147.71        0.0450
01693>                   42.00         148.10        0.0450
01694>                   45.00         148.90        0.0450
01695>                   48.00         149.05        0.0450
01696>                   51.00         149.12        0.0450
01697>                   54.00         149.43        0.0450
01698>                   57.00         149.67        0.0450
01699>
01700>       <---------------------- TRAVEL TIME TABLE ----------------------->
01701>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01702>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01703>         0.14   146.85    .156E+03       0.1         0.30       40.24
01704>         0.27   146.99    .583E+03       0.4         0.51       23.51
01705>         0.41   147.13    .119E+04       1.1         0.68       17.78
01706>         0.54   147.26    .198E+04       2.2         0.82       14.76
01707>         0.69   147.41    .309E+04       4.3         1.02       11.88
01708>         0.84   147.56    .455E+04       7.2         1.15       10.50
01709>         0.98   147.70    .637E+04      10.9         1.24        9.73
01710>         1.13   147.85    .862E+04      15.8         1.32        9.12
01711>         1.28   148.00    .111E+05      21.7         1.41        8.55
01712>         1.42   148.14    .139E+05      28.7         1.50        8.06
01713>         1.57   148.29    .169E+05      37.1         1.59        7.58
01714>         1.72   148.44    .200E+05      46.5         1.68        7.16
01715>         1.87   148.58    .233E+05      57.0         1.77        6.80
01716>         2.01   148.73    .268E+05      68.3         1.85        6.53
01717>         2.16   148.88    .305E+05      80.9         1.92        6.28
01718>         2.31   149.02    .345E+05      93.2         1.95        6.17
01719>         2.45   149.17    .391E+05     106.6         1.97        6.11
01720>         2.60   149.32    .441E+05     123.2         2.02        5.97
01721>         2.75   149.47    .495E+05     139.7         2.04        5.91
01722>
01723>                                    <---- hydrograph ---->   <-pipe / channel->
01724>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01725>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01726>    INFLOW : ID= 2 ( 50250)  271.19    24.92    6.08  49.06      1.35      1.45
01727>    OUTFLOW: ID= 1 ( 60250)  271.19    21.54    6.17  49.06      1.27      1.41
01728>
01729>
01730>
01731> ------------------------------------------------------------------------------
01732> --------------------
01733> | CALIB             |
01734> | STANDHYD ( 40260)|   Area    (ha)=  28.45
01735> |ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
01736> --------------------
01737>                              IMPERVIOUS    PERVIOUS (i)
01738>      Surface Area     (ha)=      15.93        12.52
01739>      Dep. Storage     (mm)=       2.00         6.70
01740>      Average Slope     (%)=       1.30         1.30
01741>      Length            (m)=     435.49        46.00
01742>      Mannings n            =      0.015        0.300
01743>
01744>      Max.Eff.Inten.(mm/hr)=      95.56        76.48
01745>                   over (min)        5.00        20.00
01746>      Storage Coeff.  (min)=       6.33 (ii)   17.18 (ii)
01747>      Unit Hyd. Tpeak (min)=       5.00        20.00
01748>      Unit Hyd. peak  (cms)=       0.19         0.06
01749>                                                          *TOTALS*
01750>      PEAK FLOW       (cms)=       3.05         1.46          4.072 (iii)
01751>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
01752>      RUNOFF VOLUME    (mm)=      70.52        37.69          51.80
01753>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
01754>      RUNOFF COEFFICIENT   =       0.97         0.52           0.71
01755>
01756>
01757>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01758>            CN*  =  78.7    Ia = Dep. Storage  (Above)
01759>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01760>            THAN THE STORAGE COEFFICIENT.
01761>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01762>
01763> ------------------------------------------------------------------------------
01764>
01765> --------------------
01766> | ADD HYD  ( 50260)|
01767> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01768> --------------------         (ha)    (cms)    (hrs)     (mm)
01769>         ID1= 1 ( 40260):    28.45   4.072     6.00    51.80
01770>       + ID2= 2 ( 60250):   271.19  21.541     6.17    49.06
01771>         ==================================================
01772>         ID = 3 ( 50260):   299.64  23.977     6.17    49.32
01773>
01774>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01775> ------------------------------------------------------------------------------
01776> --------------------
01777> | ROUTE CHN( 60260)|
01778> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01779> --------------------
01780>                <------ DATA FOR SECTION (   1.1) ------>
01781>                Distance      Elevation       Manning
01782>                    0.00         143.17        0.0450
01783>                    4.00         143.15        0.0450
01784>                    8.00         143.14        0.0450
01785>                   12.00         142.95        0.0450
01786>                   16.00         142.87        0.0450
01787>                   20.00         142.67        0.0450
01788>                   24.00         142.24        0.0450
01789>                   28.00         141.84        0.0450
01790>                   32.00         141.61        0.0450
01791>                   36.00         141.32        0.0450
01792>                   40.00         140.98        0.0450
01793>                   44.00         140.88        0.0450
01794>                   48.00         139.95        0.0350      Main Channel
01795>                   52.00         140.09        0.0350      Main Channel
01796>                   56.00         141.11        0.0450
01797>                   60.00         141.43        0.0450
01798>                   76.00         143.21        0.0450
01799>
01800>       <---------------------- TRAVEL TIME TABLE ----------------------->
01801>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01802>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01803>         0.17   140.12    .479E+03       0.2         0.48       36.89
01804>         0.34   140.29    .147E+04       1.2         0.86       20.63
01805>         0.51   140.46    .272E+04       2.9         1.12       15.78
01806>         0.68   140.63    .421E+04       5.3         1.33       13.28
01807>         0.85   140.80    .596E+04       8.5         1.51       11.69
01808>         1.02   140.97    .812E+04      12.0         1.56       11.29
01809>         1.19   141.14    .111E+05      17.6         1.68       10.52
01810>         1.36   141.31    .147E+05      25.4         1.83        9.67
01811>         1.53   141.48    .191E+05      34.9         1.93        9.14
01812>         1.70   141.65    .242E+05      46.4         2.03        8.71
01813>         1.87   141.81    .301E+05      59.9         2.11        8.38
01814>         2.04   141.98    .367E+05      76.6         2.21        7.99
01815>         2.21   142.15    .439E+05      95.9         2.31        7.63
01816>         2.37   142.32    .517E+05     117.9         2.42        7.30
01817>         2.54   142.49    .600E+05     142.7         2.52        7.01
01818>         2.71   142.66    .689E+05     170.3         2.62        6.74
01819>         2.88   142.83    .785E+05     198.2         2.68        6.60
01820>         3.05   143.00    .892E+05     225.9         2.68        6.58
01821>         3.22   143.17    .101E+06     250.7         2.63        6.73
01822>
01823>                                    <---- hydrograph ---->   <-pipe / channel->
01824>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01825>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01826>    INFLOW : ID= 2 ( 50260)  299.64    23.98    6.17  49.32      1.33      1.80
01827>    OUTFLOW: ID= 1 ( 60260)  299.64    21.10    6.25  49.32      1.26      1.74
01828>
01829>
01830>
01831> ------------------------------------------------------------------------------
01832> --------------------
01833> | CALIB             |
01834> | STANDHYD ( 40270)|   Area    (ha)=   9.83
01835> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
01836> --------------------
```

```
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12          6.71
     Dep. Storage     (mm)=       2.00          8.03
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     256.01         73.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=      95.56         53.51
                   over (min)     5.00         25.00
     Storage Coeff.  (min)=       4.84 (ii)    23.22 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.22          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.56          0.55          0.880 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25           6.00
     RUNOFF VOLUME    (mm)=      70.52         36.11          43.69
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.50           0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40270):     9.83   0.880     6.00    43.69
     + ID2= 2 ( 60260):   299.64  21.099     6.25    49.32
       ====================================================
       ID = 3 ( 50270):   309.47  21.753     6.25    49.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.16         11.14
     Dep. Storage     (mm)=       2.00          7.27
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     456.83         53.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=      95.56         77.52
                   over (min)     5.00         20.00
     Storage Coeff.  (min)=       6.85 (ii)    19.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.18          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.97          1.24          4.834 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      70.52         36.46          54.05
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.50           0.75


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40280):    31.30   4.834     6.00    54.05
     + ID2= 2 ( 50270):   309.47  21.753     6.25    49.14
       ====================================================
       ID = 3 ( 50280):   340.77  23.925     6.25    49.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        139.35        0.0450
                  3.00        139.19        0.0450
                  6.00        138.46        0.0450
                 27.00        137.71        0.0450
                 30.00        137.44        0.0350      Main Channel
                 33.00        137.26        0.0350      Main Channel
                 36.00        137.51        0.0350      Main Channel
                 39.00        137.64    0.0350 /0.0450  Main Channel
                 42.00        137.71        0.0450
                 57.00        139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  137.35    .361E+02       0.0          0.30       17.09
        0.18  137.44    .145E+03       0.2          0.48       10.76
        0.30  137.55    .369E+03       0.8          0.68        7.57
        0.41  137.67    .717E+03       1.9          0.82        6.28
        0.52  137.78    .124E+04       3.9          0.97        5.27
        0.63  137.89    .192E+04       6.8          1.10        4.67
        0.74  138.00    .273E+04      10.7          1.20        4.25
        0.86  138.11    .369E+04      15.7          1.30        3.93
        0.97  138.23    .480E+04      21.8          1.39        3.67
        1.08  138.34    .605E+04      29.1          1.48        3.46
        1.19  138.45    .745E+04      37.8          1.56        3.28
        1.31  138.56    .895E+04      48.6          1.67        3.07
        1.42  138.68    .105E+05      60.8          1.78        2.88
        1.53  138.79    .121E+05      74.4          1.89        2.71
        1.64  138.90    .138E+05      89.3          1.99        2.57
        1.76  139.01    .155E+05     105.5          2.10        2.44
        1.87  139.13    .172E+05     123.0          2.19        2.33
        1.98  139.24    .190E+05     140.8          2.27        2.25
        2.09  139.35    .209E+05     159.0          2.33        2.20

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    23.93    6.25  49.59      1.00      1.42
   OUTFLOW: ID= 1 ( 60280)  340.77    23.42    6.33  49.59      0.99      1.41


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| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.71          4.81
     Dep. Storage     (mm)=       2.00          7.99
     Average Slope     (%)=       1.60          1.60
     Length            (m)=     277.19         63.00
     Mannings n           =      0.015         0.340

     Max.Eff.Inten.(mm/hr)=      95.56         72.51
                   over (min)     5.00         20.00
     Storage Coeff.  (min)=       4.54 (ii)    18.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.23          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.34          0.52          1.701 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      70.52         35.02          50.98
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.48           0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40300):    11.53   1.701     6.00    50.98
     + ID2= 2 ( 60280):   340.77  23.419     6.33    49.59
       ====================================================
       ID = 3 ( 50300):   352.30  24.109     6.25    49.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        137.26        0.0450
                  4.00        136.94        0.0450
                  8.00        136.82        0.0450
                 12.00        136.69        0.0450
                 16.00        136.55        0.0450
                 36.00        135.52        0.0350      Main Channel
                 64.00        136.21        0.0450
                 75.00        136.49        0.0450
                 84.00        137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  135.61    .491E+02       0.1          0.26       12.99
        0.18  135.70    .196E+03       0.4          0.42        8.18
        0.27  135.79    .442E+03       1.2          0.55        6.24
        0.36  135.88    .785E+03       2.5          0.66        5.15
        0.45  135.97    .123E+04       4.6          0.77        4.44
        0.53  136.06    .177E+04       7.5          0.87        3.93
        0.62  136.15    .240E+04      11.3          0.96        3.55
        0.71  136.24    .314E+04      16.4          1.07        3.19
        0.80  136.32    .397E+04      23.3          1.20        2.84
        0.89  136.41    .490E+04      31.4          1.32        2.60
        0.98  136.50    .592E+04      40.8          1.42        2.41
        1.07  136.59    .701E+04      51.5          1.51        2.27
        1.16  136.68    .816E+04      63.4          1.59        2.14
        1.25  136.77    .938E+04      76.6          1.67        2.04
        1.34  136.86    .107E+05      91.2          1.75        1.95
        1.42  136.95    .120E+05     107.3          1.83        1.87
        1.51  137.04    .135E+05     125.8          1.91        1.78
        1.60  137.13    .149E+05     145.6          2.00        1.71
        1.69  137.22    .164E+05     166.8          2.08        1.64

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30    24.11    6.25  49.63      0.81      1.21
   OUTFLOW: ID= 1 ( 60300)  352.30    24.21    6.33  49.63      0.81      1.21


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77          6.39
     Dep. Storage     (mm)=       2.00          8.38
     Average Slope     (%)=       3.20          3.20
     Length            (m)=     247.21         43.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=      95.56         63.43
                   over (min)     5.00         15.00
     Storage Coeff.  (min)=       3.44 (ii)    12.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.26          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.57          0.68          1.152 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      70.52         34.06          42.63
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.47           0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40290):     9.17   1.152     6.00    42.63
     + ID2= 2 ( 60300):   352.30  24.212     6.33    49.63
       ====================================================
       ID = 3 ( 50340):   361.46  24.685     6.33    49.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50110):   346.28  12.716     6.17    49.34
     + ID2= 2 ( 50340):   361.46  24.685     6.33    49.46
       ====================================================
       ID = 3 ( 50350):   707.75  36.745     6.25    49.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        134.05        0.0450
                 24.00        133.67        0.0450
                 30.00        131.85        0.0450
                 36.00        131.42        0.0450
                 42.00        130.48        0.0450
                 48.00        130.42        0.0350      Main Channel
                 54.00        130.42        0.0350      Main Channel
                 60.00        130.62        0.0450
                 66.00        130.77        0.0450
                 72.00        131.03        0.0450
                 78.00        131.43        0.0450
                 84.00        131.38        0.0450
                 90.00        131.33        0.0450
                 96.00        131.98        0.0450
                102.00        133.31        0.0450
                120.00        133.95        0.0450
```

```
      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00  130.42    .133E+02        0.0         0.03     768.63
        0.19  130.61    .383E+04        1.6         0.61      40.07
        0.37  130.79    .994E+04        6.6         0.97      25.18
        0.56  130.98    .179E+05       15.1         1.23      19.81
        0.75  131.16    .272E+05       27.2         1.46      16.72
        0.93  131.35    .377E+05       42.2         1.64      14.88
        1.12  131.54    .521E+05       60.9         1.71      14.26
        1.30  131.72    .683E+05       87.2         1.86      13.07
        1.49  131.91    .857E+05      119.1         2.03      11.99
        1.68  132.09    .104E+06      157.8         2.22      10.96
        1.86  132.28    .122E+06      201.6         2.41      10.11
        2.05  132.47    .141E+06      250.1         2.59       9.41
        2.23  132.65    .160E+06      303.1         2.76       8.82
        2.42  132.84    .180E+06      360.6         2.93       8.32
        2.61  133.02    .200E+06      422.5         3.08       7.90
        2.79  133.21    .221E+06      488.7         3.24       7.53
        2.98  133.40    .242E+06      552.2         3.34       7.29
        3.16  133.58    .264E+06      613.6         3.40       7.17
        3.35  133.77    .288E+06      658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)   707.75    36.74    6.25  49.40      0.87      1.57
   OUTFLOW: ID= 1 ( 60350)   707.75    32.16    6.50  49.39      0.81      1.51


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.223 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.993
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.80   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.093 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.963
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      95.56       205.94
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.26 (ii)    2.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.29
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15         0.25          0.407 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      70.52        56.78         61.72
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.78          0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.15     0.00     0.00     0.00     0.00     0.15
        0.15     1.00     0.00     0.00     0.00     1.15
        0.15   100.00     0.00     0.00     0.00   100.15

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   1.62      0.41      6.00   61.72
     ================================================
     ID= 2  (   2)    :   1.28      0.15      6.00   61.72
     ID= 3  (   2)    :   0.34      0.25      6.00   61.72
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80   0.093     6.08    40.96
      + ID2= 2 (******):     1.28   0.154     6.00    61.72
        ================================================
        ID = 3 (******):     2.08   0.239     6.00    53.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22   0.223     6.08    40.99
      + ID2= 2 (******):     2.08   0.239     6.00    53.72
        ================================================
        ID = 3 (******):     4.30   0.426     6.00    47.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   4.30      0.43      6.00   47.15
     ================================================
     ID= 2  (   2)    :   2.15      0.21      6.00   47.15
     ID= 3  (   2)    :   2.15      0.21      6.00   47.15
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.03   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.113 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.978
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.113     6.08    40.98
      + ID2= 2 (******):     2.15   0.213     6.00    47.15
        ================================================
        ID = 3 (******):     3.18   0.317     6.08    45.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.077 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.899
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.077     6.08    40.90
      + ID2= 2 (******):     2.15   0.213     6.00    47.15
        ================================================
        ID = 3 (******):     2.76   0.290     6.00    45.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.066 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.938
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.039 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  40.709
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.561

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.039     6.00    40.71
      + ID2= 2 (******):     0.54   0.066     6.08    40.94
        ================================================
        ID = 3 (******):     0.80   0.101     6.00    40.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.80   0.101     6.00    40.86
      + ID2= 2 (******):     2.76   0.290     6.00    45.76
        ================================================
        ID = 1 (******):     3.56   0.392     6.00    44.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.224 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.989
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
```

```
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.118 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.963
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.29   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.17

     Unit Hyd Qpeak  (cms)=   0.065

     PEAK FLOW       (cms)=   0.038 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  40.870
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   3.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         0.65
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n            =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      95.56       295.81
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.26 (ii)    2.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.30
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.40         0.54          0.935 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      70.52        60.54          64.63
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.83           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.37     0.00     0.00     0.00     0.00     0.37
        0.37     1.00     0.00     0.00     0.00     1.37
        0.37   100.00     0.00     0.00     0.00   100.37

                          AREA     QPEAK     TPEAK     R.V.
                          (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   3.63      0.93      6.00    64.63
     ================================================
     ID= 2  (   2)    :   2.89      0.37      6.00    64.63
     ID= 3  (   2)    :   0.74      0.56      6.00    64.63
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.29   0.038     6.00    40.87
     + ID2= 2 (******):     2.89   0.373     6.00    64.63
       ================================================
       ID = 3 (******):     3.18   0.411     6.00    62.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     1.01   0.118     6.08    40.96
     + ID2= 2 (******):     3.18   0.411     6.00    62.46
       ================================================
       ID = 3 (******):     4.19   0.518     6.00    57.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     2.16   0.224     6.08    40.99
     + ID2= 2 (******):     4.19   0.518     6.00    57.27
       ================================================
       ID = 3 (******):     6.35   0.709     6.00    51.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.217 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.972
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.087 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.938
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   8.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.21         0.08
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n            =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      95.56        69.74
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.26 (ii)    1.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.33
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.18         0.02          2.195 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      70.52        42.62          70.24
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.59           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.01
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n            =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      95.56        69.74
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.26 (ii)    1.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.33
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.31         0.00          0.315 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      70.52        42.62          70.24
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.59           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.71   0.087     6.08    40.94
     + ID2= 2 (******):     1.92   0.217     6.08    40.97
       ================================================
       ID = 3 (******):     2.63   0.304     6.08    40.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     2.63   0.304     6.08    40.96
     + ID2= 2 (******):     8.29   2.195     6.00    70.24
       ================================================
       ID = 1 (******):    10.92   2.471     6.00    63.19

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    10.92   2.471     6.00    63.19
     + ID2= 2 (******):     1.19   0.315     6.00    70.24
       ================================================
       ID = 3 (******):    12.11   2.786     6.00    63.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    12.11   2.786     6.00    63.88
     + ID2= 2 (******):     3.18   0.317     6.08    45.15
       ================================================
       ID = 1 (******):    15.29   3.099     6.00    59.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    15.29   3.099     6.00    59.99
     + ID2= 2 (******):     3.56   0.392     6.00    44.66
       ================================================
       ID = 3 (******):    18.85   3.491     6.00    57.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    18.85   3.491     6.00    57.09
     + ID2= 2 (******):     6.35   0.709     6.00    51.73
       ================================================
       ID = 1 (******):    25.19   4.200     6.00    55.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    1.0509      1.2511
                           0.0499      0.1231   |    1.2225      1.4841
                           0.0887      0.3106   |    1.2743      1.5652
                           0.1027      0.4143   |    1.3240      1.6479
                           0.1415      0.5824   |    1.5681      1.7322
                           0.4137      0.7655   |    1.9730      1.8182
                           0.8423      1.0330   |    2.4824      1.9059
```

```
                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     25.192      4.200      6.00      55.74
   OUTFLOW: ID= 1 (******)     25.192      0.564      6.75      55.72
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.43
                  TIME SHIFT OF PEAK FLOW          (min)= 45.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8599

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30361002) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3(30361001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30361002)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.70   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.127

     PEAK FLOW       (cms)=   0.084 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.952
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    25.19   0.564     6.75    55.72
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 50360):    25.19   0.564     6.75    55.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50360):    25.19   0.564     6.75    55.72
      + ID2= 2 (******):     0.70   0.084     6.08    40.95
        ================================================
        ID = 1 ( 50360):    25.89   0.584     6.58    55.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50360):    25.89   0.584     6.58    55.32
      + ID2= 2 ( 60350):   707.75  32.164     6.50    49.39
        ================================================
        ID = 3 ( 50360):   733.64  32.738     6.50    49.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         127.30        0.0450
                  6.00         127.39        0.0450
                 12.00         127.46        0.0450
                 18.00         126.87        0.0450
                 24.00         125.30        0.0450
                 30.00         123.90        0.0450
                 36.00         123.14        0.0450
                 42.00         123.07        0.0450
                 48.00         122.88        0.0450
                 54.00         122.90        0.0450
                 60.00         122.95        0.0450
                 66.00         123.04        0.0450
                 72.00         123.15        0.0350      Main Channel
                 78.00         122.98        0.0450
                 84.00         122.97        0.0450
                 90.00         122.96        0.0450
                 96.00         122.92        0.0450
                102.00         123.50        0.0450
                108.00         124.18        0.0450
                120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   122.98    .246E+03        0.4          0.31      10.02
        0.33   123.21    .251E+04       11.8          0.86       3.57
        0.56   123.45    .538E+04       39.9          1.37       2.25
        0.80   123.68    .842E+04       81.1          1.78       1.73
        1.04   123.92    .116E+05      134.5          2.13       1.44
        1.27   124.16    .150E+05      200.0          2.46       1.25
        1.51   124.39    .185E+05      278.3          2.78       1.11
        1.74   124.63    .220E+05      367.4          3.08       1.00
        1.98   124.86    .257E+05      466.7          3.35       0.92
        2.22   125.10    .294E+05      576.1          3.61       0.85
        2.45   125.34    .332E+05      695.4          3.86       0.80
        2.69   125.57    .371E+05      824.8          4.10       0.75
        2.92   125.81    .410E+05      963.8          4.33       0.71
        3.16   126.04    .451E+05     1112.3          4.55       0.68
        3.39   126.28    .492E+05     1270.1          4.76       0.65
        3.63   126.51    .534E+05     1437.3          4.97       0.62
        3.87   126.75    .576E+05     1613.7          5.16       0.60
        4.10   126.99    .620E+05     1791.1          5.33       0.58
        4.34   127.22    .665E+05     1970.4          5.47       0.56

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)  733.64    32.74    6.50  49.60      0.50      1.19
   OUTFLOW: ID= 1 ( 60390)  733.64    32.98    6.50  49.60      0.51      1.20


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 80.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   2.011 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  32.534
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.449

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   2.011     6.08    32.53
      + ID2= 2 ( 60390):   733.64  32.980     6.50    49.60
        ================================================
        ID = 3 ( 50390):   754.19  33.683     6.50    49.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83          6.10
     Dep. Storage     (mm)=       2.00          6.08
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     345.74         42.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      95.56         96.41
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.28 (ii)    13.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.40          0.99          3.260 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      70.52         41.93          56.89
     TOTAL RAINFALL   (mm)=      72.52         72.52          72.52
     RUNOFF COEFFICIENT   =       0.97          0.58           0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         127.70        0.0450
                 18.00         126.87        0.0450
                 24.00         125.30        0.0450
                 30.00         123.90        0.0450
                 36.00         123.14        0.0450
                 42.00         123.07        0.0450
                 48.00         122.88        0.0450
                 54.00         122.90        0.0450
                 60.00         122.95        0.0450
                 66.00         123.04    0.0450 /0.0350  Main Channel
                 72.00         122.86        0.0350      Main Channel
                 78.00         122.98        0.0450
                 84.00         122.97        0.0450
                 90.00         122.96        0.0450
                 96.00         122.92        0.0450
                102.00         123.50        0.0450
                108.00         124.18        0.0450
                120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   122.98    .275E+03        0.7          0.35       6.78
        0.36   123.21    .218E+04       14.7          0.95       2.47
        0.59   123.45    .437E+04       44.6          1.44       1.63
        0.83   123.68    .670E+04       87.2          1.84       1.28
        1.06   123.92    .916E+04      141.6          2.19       1.08
        1.30   124.16    .117E+05      208.1          2.51       0.94
        1.54   124.39    .144E+05      287.0          2.82       0.84
        1.77   124.63    .171E+05      376.7          3.11       0.76
        2.01   124.86    .199E+05      476.5          3.38       0.70
        2.24   125.10    .228E+05      586.1          3.64       0.65
        2.48   125.33    .257E+05      705.6          3.88       0.61
        2.71   125.57    .287E+05      835.1          4.12       0.57
        2.95   125.80    .317E+05      974.0          4.35       0.54
        3.19   126.04    .348E+05     1122.3          4.56       0.52
        3.42   126.28    .379E+05     1279.8          4.77       0.49
        3.66   126.51    .411E+05     1446.6          4.97       0.47
        3.89   126.75    .444E+05     1622.6          5.17       0.46
        4.13   126.98    .477E+05     1786.6          5.29       0.45
        4.36   127.22    .513E+05     1942.9          5.36       0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     3.26    6.00  56.89      0.17      0.39
   OUTFLOW: ID= 1 ( 60370)   17.93     2.67    6.08  56.89      0.16      0.38


--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   754.19  33.683     6.50    49.14
      + ID2= 2 ( 60370):    17.93   2.669     6.08    56.89
        ================================================
        ID = 3 ( 50400):   772.12  34.609     6.50    49.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         125.01        0.0450
                 20.00         123.70        0.0450
                 25.00         123.04        0.0450
                 30.00         120.84        0.0450
                 35.00         119.81    0.0450 /0.0350  Main Channel
                 40.00         119.74        0.0350      Main Channel
                 65.00         120.12        0.0450
                 90.00         120.58        0.0450
                100.00         125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.07   119.81    .209E+03        0.1          0.27      34.81
        0.35   120.09    .326E+04        4.7          0.83      11.50
        0.62   120.36    .916E+04       21.3          1.34       7.16
        0.90   120.63    .176E+05       51.5          1.68       5.69
        1.17   120.91    .270E+05       96.6          2.05       4.67
        1.44   121.18    .367E+05      153.8          2.41       3.98
        1.72   121.46    .466E+05      222.1          2.74       3.50
        1.99   121.73    .567E+05      300.7          3.05       3.14
        2.26   122.00    .669E+05      389.1          3.34       2.87
        2.54   122.28    .774E+05      487.1          3.62       2.65
        2.81   122.55    .880E+05      594.2          3.88       2.47
        3.09   122.82    .988E+05      710.4          4.13       2.32
        3.36   123.10    .110E+06      834.4          4.36       2.20
        3.63   123.37    .121E+06      964.4          4.57       2.10
        3.91   123.65    .133E+06     1104.4          4.76       2.01
        4.18   123.92    .145E+06     1250.0          4.93       1.94
```

```
03061>        4.45   124.19    .159E+06    1406.7          5.09       1.88
03062>        4.73   124.47    .172E+06    1575.5          5.25       1.82
03063>        5.00   124.74    .187E+06    1756.1          5.39       1.77
03064>
03065>                                    <---- hydrograph ---->   <-pipe / channel->
03066>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
03067>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
03068>    INFLOW : ID= 2 ( 50400)  772.12    34.61    6.50  49.32      0.74      1.47
03069>    OUTFLOW: ID= 1 ( 60400)  772.12    33.94    6.58  49.32      0.73      1.46
03070>
03071>
03072>
03073> ---------------------------------------------------------------------------
03074> --------------------
03075> | CALIB            |
03076> | STANDHYD ( 40410)|   Area     (ha)=   7.92
03077> |ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
03078> --------------------
03079>                              IMPERVIOUS    PERVIOUS (i)
03080>      Surface Area     (ha)=       2.26         5.65
03081>      Dep. Storage     (mm)=       2.00         9.48
03082>      Average Slope     (%)=       1.10         1.10
03083>      Length            (m)=     229.75       574.00
03084>      Mannings n           =      0.015        0.350
03085>
03086>      Max.Eff.Inten.(mm/hr)=      95.56        20.00
03087>                 over (min)        5.00       105.00
03088>      Storage Coeff.  (min)=       4.54 (ii)  101.79 (ii)
03089>      Unit Hyd. Tpeak (min)=       5.00       105.00
03090>      Unit Hyd. peak  (cms)=       0.23         0.01
03091>                                                          *TOTALS*
03092>      PEAK FLOW       (cms)=       0.51         0.13          0.529 (iii)
03093>      TIME TO PEAK    (hrs)=       6.00         7.67          6.00
03094>      RUNOFF VOLUME    (mm)=      70.52        30.89         40.82
03095>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
03096>      RUNOFF COEFFICIENT   =       0.97         0.43          0.56
03097>
03098> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
03099>
03100>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
03101>              CN*  =  78.3    Ia = Dep. Storage  (Above)
03102>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
03103>            THAN THE STORAGE COEFFICIENT.
03104>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03105>
03106> ---------------------------------------------------------------------------
03107>
03108> --------------------
03109> | ADD HYD  ( 50410)|
03110> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03111> --------------------          (ha)    (cms)    (hrs)     (mm)
03112>         ID1= 1 ( 40410):     7.92    0.529     6.00    40.82
03113>       + ID2= 2 ( 60400):   772.12   33.936     6.58    49.32
03114>         ==================================================
03115>         ID = 3 ( 50410):   780.04   34.035     6.58    49.23
03116>
03117>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03118> ---------------------------------------------------------------------------
03119> --------------------
03120> | CALIB            |
03121> | NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
03122> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
03123> --------------------   U.H. Tp(hrs)=   0.25
03124>
03125>      Unit Hyd Qpeak  (cms)=   0.196
03126>
03127>      PEAK FLOW       (cms)=   0.137 (i)
03128>      TIME TO PEAK    (hrs)=   6.083
03129>      RUNOFF VOLUME    (mm)=  40.984
03130>      TOTAL RAINFALL   (mm)=  72.519
03131>      RUNOFF COEFFICIENT   =   0.565
03132>
03133>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03134>
03135> ---------------------------------------------------------------------------
03136> --------------------
03137> | CALIB            |
03138> | NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
03139> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
03140> --------------------   U.H. Tp(hrs)=   0.24
03141>
03142>      Unit Hyd Qpeak  (cms)=   0.197
03143>
03144>      PEAK FLOW       (cms)=   0.136 (i)
03145>      TIME TO PEAK    (hrs)=   6.083
03146>      RUNOFF VOLUME    (mm)=  40.978
03147>      TOTAL RAINFALL   (mm)=  72.519
03148>      RUNOFF COEFFICIENT   =   0.565
03149>
03150>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03151>
03152> ---------------------------------------------------------------------------
03153> --------------------
03154> | CALIB            |
03155> | NASHYD   (******)|   Area     (ha)=   4.12   Curve Number   (CN)= 85.0
03156> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
03157> --------------------   U.H. Tp(hrs)=   0.33
03158>
03159>      Unit Hyd Qpeak  (cms)=   0.477
03160>
03161>      PEAK FLOW       (cms)=   0.365 (i)
03162>      TIME TO PEAK    (hrs)=   6.167
03163>      RUNOFF VOLUME    (mm)=  41.006
03164>      TOTAL RAINFALL   (mm)=  72.519
03165>      RUNOFF COEFFICIENT   =   0.565
03166>
03167>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03168>
03169> ---------------------------------------------------------------------------
03170>
03171> --------------------
03172> | ADD HYD  (******)|
03173> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03174> --------------------          (ha)    (cms)    (hrs)     (mm)
03175>         ID1= 1 (******):     4.12   0.365     6.17    41.01
03176>       + ID2= 2 (******):     1.24   0.136     6.08    40.98
03177>         ==================================================
03178>         ID = 3 (******):     5.36   0.494     6.17    41.00
03179>
03180>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03181> ---------------------------------------------------------------------------
03182>
03183> --------------------
03184> | ADD HYD  (******)|
03185> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
03186> --------------------          (ha)    (cms)    (hrs)     (mm)
03187>         ID1= 3 (******):     5.36   0.494     6.17    41.00
03188>       + ID2= 2 (******):     1.28   0.137     6.08    40.98
03189>         ==================================================
03190>         ID = 1 (******):     6.64   0.626     6.17    41.00
03191>
03192>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03193> ---------------------------------------------------------------------------
03194> --------------------
03195> | CALIB            |
03196> | STANDHYD ( 40420)|   Area     (ha)=  67.57
03197> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
03198> --------------------
03199>                              IMPERVIOUS    PERVIOUS (i)
03200>      Surface Area     (ha)=      20.95        46.62
03201>      Dep. Storage     (mm)=       2.00         7.70
03202>      Average Slope     (%)=       1.90         1.90
03203>      Length            (m)=     671.17        89.00
03204>      Mannings n           =      0.015        0.240
03205>
03206>      Max.Eff.Inten.(mm/hr)=      95.56        61.31
03207>                 over (min)        5.00        25.00
03208>      Storage Coeff.  (min)=       7.33 (ii)   21.07 (ii)
03209>      Unit Hyd. Tpeak (min)=       5.00        25.00
03210>      Unit Hyd. peak  (cms)=       0.17         0.05
03211>                                                          *TOTALS*
03212>      PEAK FLOW       (cms)=       4.10         3.78          6.301 (iii)
03213>      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
03214>      RUNOFF VOLUME    (mm)=      70.52        35.61         44.33
03215>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
03216>      RUNOFF COEFFICIENT   =       0.97         0.49          0.61
03217>
03218>
03219>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
03220>              CN*  =  81.0    Ia = Dep. Storage  (Above)
03221>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
03222>            THAN THE STORAGE COEFFICIENT.
03223>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03224>
03225> ---------------------------------------------------------------------------
03226>
03227> --------------------
03228> | ADD HYD  (******)|
03229> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03230> --------------------          (ha)    (cms)    (hrs)     (mm)
03231>         ID1= 1 ( 40420):    67.57   6.301     6.00    44.33
03232>       + ID2= 2 (******):     6.64   0.626     6.17    41.00
03233>         ==================================================
03234>         ID = 3 (******):    74.21   6.810     6.00    44.04
03235>
03236>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03237> ---------------------------------------------------------------------------
03238>
03239> --------------------
03240> | ADD HYD  ( 50420)|
03241> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03242> --------------------          (ha)    (cms)    (hrs)     (mm)
03243>         ID1= 1 ( 50410):   780.04  34.035     6.58    49.23
03244>       + ID2= 2 (******):    74.21   6.810     6.00    44.04
03245>         ==================================================
03246>         ID = 3 ( 50420):   854.25  37.668     6.50    48.78
03247>
03248>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03249> ---------------------------------------------------------------------------
03250> --------------------
03251> | ROUTE CHN( 60420)|
03252> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
03253> --------------------
03254>                <------ DATA FOR SECTION (   1.1) ------>
03255>                Distance      Elevation       Manning
03256>                   0.00         121.79        0.0450
03257>                  12.00         116.08        0.0450
03258>                  40.00         115.59    0.0450 /0.0350  Main Channel
03259>                  44.00         114.89        0.0350      Main Channel
03260>                  48.00         114.52        0.0350      Main Channel
03261>                  52.00         115.72    0.0350 /0.0450  Main Channel
03262>                  56.00         115.93        0.0450
03263>                  60.00         117.24        0.0450
03264>                  64.00         119.04        0.0450
03265>                  68.00         120.69        0.0450
03266>                  72.00         121.01        0.0450
03267>                  74.00         121.49        0.0450
03268>
03269>       <---------------------- TRAVEL TIME TABLE ---------------------->
03270>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
03271>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
03272>         0.36   114.88    .645E+03       0.7         0.83      14.38
03273>         0.71   115.23    .236E+04       4.6         1.41       8.47
03274>         1.07   115.59    .489E+04      12.6         1.84       6.48
03275>         1.44   115.96    .112E+05      30.9         1.97       6.04
03276>         1.80   116.33    .227E+05      69.1         2.17       5.49
03277>         2.17   116.70    .351E+05     125.6         2.56       4.65
03278>         2.54   117.06    .479E+05     197.5         2.95       4.04
03279>         2.91   117.43    .612E+05     283.9         3.32       3.59
03280>         3.28   117.80    .749E+05     384.1         3.66       3.25
03281>         3.65   118.17    .891E+05     497.4         3.99       2.99
03282>         4.02   118.54    .104E+06     623.5         4.30       2.77
03283>         4.39   118.91    .119E+06     762.2         4.59       2.60
03284>         4.76   119.28    .134E+06     913.1         4.87       2.45
03285>         5.13   119.65    .150E+06    1076.2         5.13       2.32
03286>         5.49   120.02    .166E+06    1251.7         5.38       2.21
03287>         5.86   120.39    .183E+06    1439.5         5.62       2.12
03288>         6.23   120.75    .200E+06    1634.3         5.84       2.04
03289>         6.60   121.12    .219E+06    1831.3         5.99       1.99
03290>         6.97   121.49    .238E+06    2058.5         6.20       1.92
03291>
03292>                                    <---- hydrograph ---->   <-pipe / channel->
03293>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
03294>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
03295>    INFLOW : ID= 2 ( 50420)  854.25    37.67    6.50  48.78      1.50      2.01
03296>    OUTFLOW: ID= 1 ( 60420)  854.25    36.86    6.58  48.78      1.49      2.00
03297>
03298>
03299>
03300> ---------------------------------------------------------------------------
03301> --------------------
03302> | CALIB            |
03303> | STANDHYD ( 40430)|   Area     (ha)=  32.43
03304> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
03305> --------------------
03306>                              IMPERVIOUS    PERVIOUS (i)
03307>      Surface Area     (ha)=      21.41        11.03
03308>      Dep. Storage     (mm)=       2.00         7.80
03309>      Average Slope     (%)=       3.50         3.50
03310>      Length            (m)=     465.00       102.00
03311>      Mannings n           =      0.015        0.320
03312>
03313>      Max.Eff.Inten.(mm/hr)=      95.56        45.29
03314>                 over (min)        5.00        25.00
03315>      Storage Coeff.  (min)=       4.90 (ii)   21.55 (ii)
03316>      Unit Hyd. Tpeak (min)=       5.00        25.00
03317>      Unit Hyd. peak  (cms)=       0.22         0.05
03318>                                                          *TOTALS*
03319>      PEAK FLOW       (cms)=       5.34         0.80          5.802 (iii)
03320>      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
03321>      RUNOFF VOLUME    (mm)=      70.52        33.22         57.09
03322>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
03323>      RUNOFF COEFFICIENT   =       0.97         0.46          0.79
03324>
03325> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
03326>
03327>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
03328>              CN*  =  79.3    Ia = Dep. Storage  (Above)
03329>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
03330>            THAN THE STORAGE COEFFICIENT.
03331>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03332>
03333> ---------------------------------------------------------------------------
03334>
03335> --------------------
03336> | ADD HYD  ( 50430)|
03337> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03338> --------------------          (ha)    (cms)    (hrs)     (mm)
03339>         ID1= 1 ( 40430):    32.43   5.802     6.00    57.09
03340>       + ID2= 2 ( 60420):   854.25  36.863     6.58    48.78
03341>         ==================================================
03342>         ID = 3 ( 50430):   886.68  37.877     6.58    49.08
03343>
03344>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03345> ---------------------------------------------------------------------------
03346> --------------------
03347> | ROUTE CHN( 60430)|
03348> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
03349> --------------------
03350>                <------ DATA FOR SECTION (   1.1) ------>
03351>                Distance      Elevation       Manning
03352>                   0.00         116.29        0.0450
03353>                  20.00         114.05        0.0450
03354>                  25.00         110.83        0.0450
03355>                  30.00         109.36        0.0450
03356>                  35.00         108.23    0.0450 /0.0350  Main Channel
03357>                  40.00         107.52        0.0350      Main Channel
03358>                  45.00         108.00    0.0350 /0.0450  Main Channel
03359>                  50.00         107.84        0.0450
03360>                  55.00         108.21        0.0450
03361>                  60.00         108.95        0.0450
03362>                  65.00         109.35        0.0450
03363>                  70.00         109.41        0.0450
03364>                  75.00         109.48        0.0450
03365>                  80.00         109.77        0.0450
03366>                  85.00         112.20        0.0450
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                 90.00        115.48        0.0450
                100.00        116.29        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24  107.76    .285E+03        0.4         0.74      12.74
        0.48  108.00    .146E+04        2.6         1.01       9.32
        0.97  108.49    .695E+04       23.3         1.90       4.97
        1.46  108.97    .141E+05       64.5         2.60       3.63
        1.94  109.46    .233E+05      116.9         2.84       3.33
        2.43  109.95    .371E+05      214.6         3.28       2.88
        2.92  110.44    .519E+05      350.2         3.83       2.47
        3.41  110.92    .675E+05      515.9         4.34       2.18
        3.89  111.41    .836E+05      711.3         4.82       1.96
        4.38  111.90    .100E+06      933.4         5.28       1.79
        4.87  112.39    .117E+06     1182.4         5.71       1.65
        5.35  112.87    .135E+06     1458.0         6.13       1.54
        5.84  113.36    .153E+06     1758.3         6.52       1.45
        6.33  113.85    .171E+06     2082.9         6.90       1.37
        6.82  114.34    .190E+06     2410.6         7.19       1.31
        7.30  114.82    .210E+06     2758.9         7.43       1.27
        7.79  115.31    .232E+06     3143.1         7.68       1.23
        8.28  115.80    .255E+06     3473.3         7.71       1.23
        8.77  116.29    .282E+06     3812.4         7.67       1.23

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  886.68    37.88    6.58  49.08      1.14      2.10
   OUTFLOW: ID= 1 ( 60430)  886.68    37.68    6.67  49.08      1.14      2.10
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```
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70         19.42
     Dep. Storage     (mm)=       2.00          6.60
     Average Slope     (%)=       2.50          2.50
     Length            (m)=     617.06         45.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=      95.56         46.38
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       6.42 (ii)    16.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.18          0.06
                                                    *TOTALS*
     PEAK FLOW       (cms)=       9.22          1.36        10.154 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17         6.00
     RUNOFF VOLUME    (mm)=      70.52         29.03        56.00
     TOTAL RAINFALL   (mm)=      72.52         72.52        72.52
     RUNOFF COEFFICIENT   =       0.97          0.40         0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40440):    57.11   10.154     6.00    56.00
     + ID2= 2 ( 60430):   886.68   37.684     6.67    49.08
       ================================================
       ID = 3 ( 50440):   943.80   39.056     6.67    49.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         104.01        0.0450
                 10.00         103.90        0.0450
                 20.00         103.74        0.0450
                 30.00         103.66        0.0450
                 40.00         103.60        0.0450
                 50.00         102.52        0.0450
                 60.00         101.16        0.0450
                 70.00         100.60        0.0450
                 80.00         100.17        0.0450
                 90.00          99.85        0.0450
                100.00          97.89        0.0350      Main Channel
                110.00          97.62        0.0350      Main Channel
                120.00          99.12        0.0450
                130.00          99.16        0.0450
                140.00          99.36        0.0450
                150.00          99.66        0.0450
                160.00          99.68        0.0450
                180.00          99.76        0.0450
                190.00         104.10        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27   97.89    .102E+04        1.2         0.77      13.74
        0.60   98.21    .381E+04        9.4         1.56       6.74
        0.92   98.53    .738E+04       24.3         2.08       5.05
        1.24   98.86    .117E+05       46.2         2.50       4.22
        1.56   99.18    .171E+05       76.6         2.84       3.71
        1.89   99.50    .264E+05      124.5         2.98       3.53
        2.21   99.82    .403E+05      189.1         2.96       3.56
        2.53  100.15    .597E+05      286.1         3.03       3.48
        2.85  100.47    .809E+05      417.7         3.26       3.23
        3.17  100.79    .104E+06      580.2         3.53       2.98
        3.50  101.11    .128E+06      771.7         3.81       2.77
        3.82  101.44    .153E+06      996.3         4.10       2.57
        4.14  101.76    .179E+06     1248.4         4.40       2.40
        4.46  102.08    .206E+06     1526.4         4.68       2.25
        4.79  102.40    .233E+06     1829.8         4.96       2.13
        5.11  102.73    .261E+06     2156.4         5.22       2.02
        5.43  103.05    .290E+06     2507.0         5.47       1.93
        5.75  103.37    .319E+06     2882.7         5.71       1.85
        6.08  103.69    .350E+06     3194.7         5.77       1.83

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  943.80    39.06    6.67  49.50      1.13      2.34
   OUTFLOW: ID= 1 ( 60440)  943.80    38.97    6.67  49.50      1.13      2.34
```

```
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37         17.02
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       0.80          0.80
     Length            (m)=     450.16        150.00
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=      95.56         26.11
                   over (min)        5.00         50.00
     Storage Coeff.  (min)=       7.47 (ii)    46.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00         50.00
     Unit Hyd. peak  (cms)=       0.17          0.02
                                                    *TOTALS*
     PEAK FLOW       (cms)=       3.01          0.69         3.211 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.67         6.00
     RUNOFF VOLUME    (mm)=      70.52         31.54        47.52
     TOTAL RAINFALL   (mm)=      72.52         72.52        72.52
     RUNOFF COEFFICIENT   =       0.97          0.43         0.66

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40450):    30.40    3.211     6.00    47.52
     + ID2= 2 ( 60440):   943.80   38.965     6.67    49.50
       ================================================
       ID = 3 ( 50450):   974.19   39.932     6.67    49.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         97.16        0.0450
                  3.00         96.00        0.0450
                  6.00         95.32        0.0450
                  9.00         94.64        0.0450
                 12.00         94.43        0.0450
                 15.00         94.29        0.0450
                 18.00         94.10        0.0350      Main Channel
                 21.00         94.02        0.0350      Main Channel
                 24.00         93.70        0.0350      Main Channel
                 27.00         94.22     0.0350 /0.0450 Main Channel
                 30.00         94.90        0.0450
                 32.00         95.30        0.0450
                 34.00         95.78        0.0450
                 36.00         96.25        0.0450
                 38.00         96.60        0.0450
                 48.00         97.14        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.83    .942E+02        0.1         0.39      30.45
        0.27   93.96    .377E+03        0.3         0.62      19.18
        0.40   94.09    .911E+03        0.9         0.69      17.28
        0.59   94.29    .230E+04        3.4         1.06      11.15
        0.78   94.48    .428E+04        7.9         1.32       8.98
        0.97   94.67    .679E+04       14.6         1.53       7.74
        1.16   94.86    .963E+04       23.7         1.75       6.77
        1.35   95.05    .127E+05       34.9         1.96       6.07
        1.54   95.24    .160E+05       48.1         2.14       5.54
        1.73   95.43    .196E+05       63.6         2.31       5.13
        1.92   95.62    .233E+05       81.2         2.48       4.79
        2.11   95.81    .273E+05      101.0         2.63       4.51
        2.30   96.00    .315E+05      123.0         2.78       4.27
        2.49   96.19    .360E+05      147.8         2.93       4.06
        2.68   96.38    .406E+05      174.6         3.07       3.87
        2.87   96.57    .454E+05      203.7         3.20       3.71
        3.06   96.76    .505E+05      232.7         3.28       3.62
        3.25   96.95    .562E+05      264.9         3.36       3.54
        3.44   97.14    .624E+05      300.8         3.43       3.46

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450)  974.19    39.93    6.67  49.44      1.42      2.02
   OUTFLOW: ID= 1 ( 60450)  974.19    39.57    6.75  49.44      1.42      2.02
```

```
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36          7.04
     Dep. Storage     (mm)=       2.00          6.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     386.43         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      95.56         86.71
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       4.91 (ii)    12.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.22          0.08
                                                    *TOTALS*
     PEAK FLOW       (cms)=       3.05          1.05         3.959 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=      70.52         35.02        53.78
     TOTAL RAINFALL   (mm)=      72.52         72.52        72.52
     RUNOFF COEFFICIENT   =       0.97          0.48         0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40    3.959     6.00    53.78
     + ID2= 2 ( 60450):   974.19   39.572     6.75    49.44
       ================================================
       ID = 3 ( 50460):   996.59   40.009     6.75    49.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         91.61        0.0450
                  3.00         91.57        0.0450
                  6.00         91.15        0.0450
                  9.00         90.70        0.0450
                 12.00         89.72        0.0450
                 15.00         88.86        0.0450
                 18.00         88.38     0.0450 /0.0350 Main Channel
                 21.00         87.96        0.0350      Main Channel
                 24.00         88.18     0.0350 /0.0450 Main Channel
                 26.00         88.19        0.0450
                 28.00         88.30        0.0450
                 30.00         90.32        0.0450
                 32.00         90.49        0.0450
                 34.00         90.80        0.0450
                 36.00         90.85        0.0450
                 38.00         90.97        0.0450
                 40.00         91.15        0.0450
                 42.00         91.29        0.0450
                 44.00         91.40        0.0450
```

```
                  46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   88.07    .589E+02        0.0         0.34      23.89
        0.21   88.18    .235E+03        0.3         0.54      15.05
        0.41   88.38    .106E+04        1.8         0.85       9.64
        0.61   88.57    .211E+04        5.3         1.22       6.69
        0.81   88.77    .330E+04       10.2         1.51       5.40
        1.01   88.97    .462E+04       16.6         1.76       4.63
        1.21   89.17    .603E+04       24.5         1.99       4.10
        1.41   89.37    .753E+04       33.8         2.19       3.72
        1.61   89.57    .912E+04       44.4         2.38       3.42
        1.81   89.77    .108E+05       56.4         2.56       3.19
        2.00   89.97    .125E+05       69.9         2.72       2.99
        2.20   90.17    .144E+05       84.7         2.88       2.83
        2.40   90.37    .163E+05       99.8         3.00       2.72
        2.60   90.56    .184E+05      114.7         3.04       2.68
        2.80   90.76    .208E+05      132.8         3.13       2.61
        3.00   90.96    .235E+05      148.4         3.09       2.64
        3.20   91.16    .266E+05      170.7         3.13       2.60
        3.40   91.36    .302E+05      194.9         3.16       2.58
        3.60   91.56    .342E+05      223.5         3.20       2.55

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460)  996.59    40.01    6.75  49.54       1.52      2.30
   OUTFLOW: ID= 1 ( 60460)  996.59    39.85    6.83  49.54       1.52      2.30


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53        30.66
     Dep. Storage     (mm)=       2.00         5.90
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     775.42        40.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      95.56        81.51
                 over (min)      10.00        20.00
     Storage Coeff.  (min)=       8.76 (ii)   17.88 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.12         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=      10.60         3.52        13.078 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      70.52        36.54         54.89
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.50          0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40470):    90.19  13.078     6.00    54.89
      + ID2= 2 ( 60460):   996.59  39.853     6.83    49.54
        ==========================================================
        ID = 3 ( 50470):  1086.78  42.249     6.75    49.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         89.19        0.0450
                  2.00         88.89        0.0450
                  4.00         88.54        0.0450
                  6.00         88.31        0.0450
                  8.00         88.14        0.0450
                 10.00         88.02        0.0450
                 12.00         87.99        0.0450
                 14.00         87.90        0.0450
                 16.00         87.84        0.0450
                 19.00         87.55        0.0450
                 22.00         86.85        0.0450
                 25.00         86.23        0.0350      Main Channel
                 28.00         86.23        0.0350      Main Channel
                 31.00         86.60        0.0450
                 34.00         87.49        0.0450
                 37.00         88.15        0.0450
                 41.00         88.21        0.0450
                 45.00         88.29        0.0450
                 48.00         88.36        0.0450
                 50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1086.78    42.25    6.75  49.98       1.88      1.72
   OUTFLOW: ID= 1 ( 60470) 1086.78    41.77    6.83  49.98       1.87      1.72


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82        13.61
     Dep. Storage     (mm)=       2.00         5.80
     Average Slope     (%)=       1.90         1.90
     Length            (m)=     613.35        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=      95.56       120.89
                 over (min)       5.00        15.00
     Storage Coeff.  (min)=       6.94 (ii)   13.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.17         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       8.16         2.80         10.616 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      70.52        43.82         59.57
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.60          0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40480):    56.43  10.616     6.00    59.57
      + ID2= 2 ( 60470):  1086.78  41.767     6.83    49.98
        ==========================================================
        ID = 3 ( 50480):  1143.21  42.897     6.83    50.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         86.90        0.0450
                  2.00         86.76        0.0450
                  4.00         85.96        0.0450
                  6.00         85.44        0.0450
                  8.00         84.83        0.0450
                 10.00         84.50        0.0450
                 12.00         84.15        0.0450
                 14.00         83.85        0.0350      Main Channel
                 16.00         83.86        0.0350      Main Channel
                 18.00         83.99    0.0350 /0.0450  Main Channel
                 20.00         84.27        0.0450
                 22.00         84.55        0.0450
                 24.00         84.88        0.0450
                 26.00         85.37        0.0450
                 27.00         85.68        0.0450
                 28.00         85.91        0.0450
                 29.00         86.08        0.0450
                 30.00         86.21        0.0450
                 31.00         86.29        0.0450
                 34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03        0.3         0.48      10.34
        0.32   84.17    .460E+03        1.2         0.77       6.41
        0.48   84.33    .855E+03        2.8         0.98       5.07
        0.64   84.48    .135E+04        5.2         1.14       4.35
        0.80   84.64    .193E+04        8.3         1.28       3.88
        0.95   84.80    .261E+04       12.3         1.40       3.53
        1.11   84.96    .337E+04       17.4         1.53       3.23
        1.27   85.12    .419E+04       23.5         1.66       2.97
        1.43   85.28    .506E+04       30.5         1.79       2.77
        1.59   85.44    .599E+04       38.5         1.90       2.60
        1.75   85.60    .697E+04       47.3         2.01       2.46
        1.91   85.76    .801E+04       57.1         2.12       2.34
        2.07   85.92    .911E+04       67.8         2.21       2.24
        2.23   86.07    .103E+05       79.5         2.30       2.15
        2.39   86.23    .115E+05       91.9         2.37       2.09
        2.54   86.39    .128E+05      105.7         2.45       2.02
        2.70   86.55    .142E+05      121.2         2.53       1.95
        2.86   86.71    .156E+05      138.0         2.62       1.89
        3.02   86.87    .171E+05      153.0         2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1143.21    42.90    6.83  50.45       1.67      1.96
   OUTFLOW: ID= 1 ( 60480) 1143.21    42.84    6.83  50.45       1.66      1.95


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60         4.16
     Dep. Storage     (mm)=       2.00         6.22
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     334.28        53.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      95.56       110.18
                 over (min)       5.00        15.00
     Storage Coeff.  (min)=       5.29 (ii)   14.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.21         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.59         0.75          3.243 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      70.52        42.30         59.35
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.58          0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40490):    16.76   3.243     6.00    59.35
      + ID2= 2 ( 60480):  1143.21  42.837     6.83    50.45
        ==========================================================
        ID = 3 ( 50490):  1159.97  43.618     6.17    50.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         85.84        0.0450
                  6.00         84.32        0.0450
                 12.00         84.21        0.0450
                 18.00         84.12        0.0450
                 24.00         84.08        0.0450
                 30.00         84.10        0.0450
                 36.00         84.03        0.0450
                 42.00         83.92        0.0450
                 48.00         83.88        0.0450
                 54.00         82.88        0.0350      Main Channel
                 60.00         83.12    0.0350 /0.0450  Main Channel
                 64.00         83.65        0.0450
                 68.00         83.60        0.0450
                 72.00         83.67        0.0450
                 76.00         83.70        0.0450
                 80.00         83.82        0.0450
```

```
                  84.00         83.90        0.0450
                  88.00         84.05        0.0450
                  92.00         84.16        0.0450
                 100.00         85.83        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03       0.1         0.32       46.08
        0.31   83.19    .129E+04       0.8         0.57       26.14
        0.47   83.35    .259E+04       2.3         0.79       18.75
        0.62   83.50    .418E+04       4.5         0.96       15.43
        0.78   83.66    .626E+04       7.3         1.04       14.28
        0.93   83.81    .101E+05      11.9         1.05       14.10
        1.09   83.97    .153E+05      17.6         1.02       14.55
        1.24   84.13    .231E+05      26.2         1.00       14.73
        1.40   84.28    .341E+05      41.2         1.07       13.79
        1.55   84.44    .460E+05      61.7         1.19       12.44
        1.71   84.59    .582E+05      86.6         1.32       11.21
        1.86   84.75    .706E+05     115.2         1.45       10.21
        2.02   84.90    .831E+05     147.5         1.57        9.39
        2.17   85.06    .959E+05     183.2         1.70        8.72
        2.33   85.21    .109E+06     222.2         1.81        8.16
        2.48   85.37    .122E+06     264.5         1.93        7.68
        2.64   85.52    .135E+06     310.0         2.03        7.27
        2.79   85.68    .149E+06     358.5         2.14        6.91
        2.95   85.83    .162E+06     410.1         2.24        6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1159.97    43.62    6.17  50.58      1.41      1.09
   OUTFLOW: ID= 1 ( 60490) 1159.97    42.42    7.00  50.58      1.41      1.08


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92         4.72
     Dep. Storage     (mm)=       2.00         5.43
     Average Slope     (%)=       2.10         2.10
     Length            (m)=     370.92        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=      95.56       120.18
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.98 (ii)    9.87 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.22         0.11
                                                      *TOTALS*
     PEAK FLOW       (cms)=       3.25         1.15       4.402 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=      70.52        43.79       60.16
     TOTAL RAINFALL   (mm)=      72.52        72.52       72.52
     RUNOFF COEFFICIENT   =       0.97         0.60        0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40810):    20.64   4.402     6.00    60.16
     + ID2= 2 ( 60490):  1159.97  42.422     7.00    50.58
       ================================================
       ID = 3 ( 50810):  1180.61  42.744     7.00    50.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      95.56        55.26
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.46 (ii)   13.93 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.43         0.65       0.978 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=      70.52        30.91       37.83
     TOTAL RAINFALL   (mm)=      72.52        72.52       72.52
     RUNOFF COEFFICIENT   =       0.97         0.43        0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40500):     9.32   0.978     6.00    37.83
     + ID2= 2 ( 50810):  1180.61  42.744     7.00    50.75
       ================================================
       ID = 3 ( 50500):  1189.93  42.883     7.00    50.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.105 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.971
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89         0.04
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=     115.50         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      95.56        67.47
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       3.73 (ii)    3.73 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.25         0.25
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.02         0.01       1.028 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=      70.52        41.02       70.22
     TOTAL RAINFALL   (mm)=      72.52        72.52       72.52
     RUNOFF COEFFICIENT   =       0.97         0.57        0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      95.56        67.47
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.21 (ii)    2.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.30         0.30
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.00       0.119 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=      70.52        41.02       70.22
     TOTAL RAINFALL   (mm)=      72.52        72.52       72.52
     RUNOFF COEFFICIENT   =       0.97         0.57        0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    1.8600      0.9862
                          0.0560      0.3250   |    2.1000      1.0580
                          0.2600      0.4718   |    2.2000      1.2000
                          0.7400      0.6512   |   10.0000      1.2500
                          1.4100      0.8427   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.500     5.322      6.00      54.35
   OUTFLOW: ID= 1 (******)     26.500     1.240      6.33      54.29
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 23.30
                  TIME SHIFT OF PEAK FLOW          (min)= 20.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7954

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  --------------------------
  | Junction Command(30651006) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3(30651003)    0.00     0.00    0.00      0.00
  OUTFLOW: ID= 2(30651006)    0.00     0.00    0.00      0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
       ID1= 1 (******):    26.50   1.240     6.33    54.29
     + ID2= 2 (******):     0.00   0.000     0.00     0.00
       ================================================
       ID = 3 (******):    26.50   1.240     6.33    54.29

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    26.50   1.240     6.33    54.29
     + ID2= 2 (******):     0.93   0.105     6.08    40.97
       ================================================
       ID = 1 (******):    27.43   1.313     6.25    53.84
```

```
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    27.43   1.313     6.25    53.84
      + ID2= 2 (******):     3.93   1.028     6.00    70.22
        ================================================
        ID = 3 (******):    31.36   1.713     6.00    55.89

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    31.36   1.713     6.00    55.89
      + ID2= 2 (******):     0.45   0.119     6.00    70.22
        ================================================
        ID = 1 (******):    31.81   1.832     6.00    56.10

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

      Unit Hyd Qpeak  (cms)=   1.241

      PEAK FLOW       (cms)=   1.039 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  41.014
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.566

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62   1.039     6.33    41.01
      + ID2= 2 (******):    31.81   1.832     6.00    56.10
        ================================================
        ID = 3 (******):    46.43   2.511     6.25    51.35

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        443.75        0.0450
                  8.50        443.74        0.0450
                 35.47        443.64        0.0450
                 64.60        443.29        0.0450
                 74.71        443.18        0.0450
                 80.25        443.17        0.0450
                112.17        443.12    0.0450 /0.0350  Main Channel
                131.57        442.76        0.0350      Main Channel
                137.50        442.66        0.0350      Main Channel
                137.91        442.67        0.0350      Main Channel
                152.28        442.24        0.0350      Main Channel
                167.40        441.39        0.0350      Main Channel
                178.29        441.56        0.0350      Main Channel
                216.75        442.01        0.0350      Main Channel
                221.54        442.05    0.0350 /0.0450  Main Channel
                334.66        442.50        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.05   441.45    .114E+03       0.0          0.27      55.89
      0.11   441.50    .457E+03       0.2          0.43      35.21
      0.16   441.56    .103E+04       0.6          0.57      26.87
      0.22   441.61    .185E+04       1.4          0.67      22.84
      0.27   441.67    .297E+04       2.5          0.77      19.84
      0.33   441.72    .437E+04       4.1          0.87      17.59
      0.38   441.78    .605E+04       6.4          0.96      15.85
      0.44   441.83    .802E+04       9.2          1.05      14.47
      0.49   441.89    .103E+05      12.8          1.14      13.35
      0.55   441.94    .128E+05      17.2          1.23      12.42
      0.60   442.00    .157E+05      22.4          1.31      11.63
      0.66   442.05    .188E+05      28.3          1.38      11.07
      0.71   442.11    .225E+05      36.9          1.50      10.16
      0.78   442.17    .277E+05      48.4          1.60       9.54
      0.84   442.24    .339E+05      61.9          1.67       9.13
      0.91   442.30    .412E+05      77.1          1.71       8.90
      0.97   442.36    .495E+05      94.7          1.75       8.71
      1.03   442.43    .589E+05     114.9          1.79       8.54
      1.10   442.49    .693E+05     137.9          1.82       8.38

                                        <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 (******)     46.43     2.51    6.25   51.35      0.28      0.77
   OUTFLOW: ID= 1 (******)     46.43     2.19    6.58   51.35      0.26      0.74


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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.92     0.00     0.00     0.00     0.00     0.92
       1.00     0.73     0.00     0.00     0.00     1.73
       1.00     1.11     0.00     0.00     0.00     2.11
       1.00     1.60     0.00     0.00     0.00     2.60
       1.00     2.08     0.00     0.00     0.00     3.08
       1.00     2.63     0.00     0.00     0.00     3.63
       1.00     4.53     0.00     0.00     0.00     5.53

                          AREA     QPEAK     TPEAK     R.V.
                          (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):  46.43      2.19      6.58    51.35
     ================================================
     ID= 2  (   2)    :  37.74      1.00      6.58    51.35
     ID= 3  (   2)    :   8.69      1.19      6.58    51.35
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        443.75        0.0000
                  8.50        443.74        0.0450
                 35.47        443.64        0.0450
                 64.60        443.29        0.0450
                 74.71        443.18        0.0450
                 80.25        443.17        0.0450
                112.17        443.12    0.0450 /0.0350  Main Channel
                131.57        442.76        0.0350      Main Channel
                137.50        442.66        0.0350      Main Channel
                137.91        442.67        0.0350      Main Channel
                152.28        442.24        0.0350      Main Channel
                167.40        441.39        0.0350      Main Channel
                178.29        441.56        0.0350      Main Channel
                216.75        442.01        0.0350      Main Channel
                221.54        442.05    0.0350 /0.0450  Main Channel
                334.66        442.50        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.05   441.45    .128E+03       0.0          0.29      60.12
      0.11   441.50    .514E+03       0.2          0.45      37.87
      0.16   441.56    .116E+04       0.7          0.59      28.90
      0.22   441.61    .208E+04       1.4          0.70      24.57
      0.27   441.67    .333E+04       2.6          0.80      21.34
      0.33   441.72    .490E+04       4.3          0.91      18.92
      0.38   441.78    .680E+04       6.6          1.01      17.05
      0.44   441.83    .901E+04       9.6          1.10      15.57
      0.49   441.89    .115E+05      13.4          1.19      14.36
      0.55   441.94    .144E+05      18.0          1.28      13.36
      0.60   442.00    .176E+05      23.4          1.37      12.51
      0.66   442.05    .211E+05      29.5          1.44      11.91
      0.71   442.11    .253E+05      38.5          1.57      10.93
      0.78   442.17    .311E+05      50.5          1.67      10.26
      0.84   442.24    .381E+05      64.7          1.74       9.82
      0.91   442.30    .463E+05      80.5          1.79       9.57
      0.97   442.36    .556E+05      98.9          1.83       9.37
      1.03   442.43    .661E+05     120.0          1.86       9.19
      1.10   442.49    .779E+05     144.1          1.90       9.01

                                        <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 (******)     37.74     1.00    6.58   51.35      0.19      0.64
   OUTFLOW: ID= 1 (******)     37.74     0.96    7.33   51.34      0.19      0.63


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

      Unit Hyd Qpeak  (cms)=   0.352

      PEAK FLOW       (cms)=   0.297 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  41.014
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.566

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.24   0.297     6.33    41.01
      + ID2= 2 (******):    37.74   0.965     7.33    51.34
        ================================================
        ID = 3 (******):    41.98   1.118     6.67    50.30

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

      Unit Hyd Qpeak  (cms)=   0.341

      PEAK FLOW       (cms)=   0.250 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  40.999
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.565

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.59   0.250     6.17    41.00
      + ID2= 2 (******):    41.98   1.118     6.67    50.30
        ================================================
        ID = 3 (******):    44.57   1.247     6.50    49.76

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        429.12        0.0500
                 37.54        428.86        0.0500
                 53.31        428.70        0.0500
                 81.17        428.24        0.0500
                 99.28        428.15    0.0500 /0.0300  Main Channel
                114.53        427.72        0.0300      Main Channel
                119.88        426.51        0.0300      Main Channel
                124.17        425.84        0.0300      Main Channel
                206.01        425.90        0.0300      Main Channel
                209.64        426.51        0.0300      Main Channel
                214.21        426.89        0.0300      Main Channel
                231.49        427.17        0.0300      Main Channel
                268.61        427.89    0.0300 /0.0500  Main Channel
                351.58        428.15        0.0500
                368.27        428.31        0.0500
                405.75        428.52        0.0500
                416.79        428.59        0.0500
                440.06        428.76        0.0500
                469.88        428.97        0.0500

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
       (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
      0.16   426.00    .187E+04       9.2          0.88       3.40
      0.31   426.16    .424E+04      35.4          1.49       2.00
      0.47   426.32    .666E+04      74.1          1.98       1.50
      0.63   426.47    .914E+04     123.7          2.41       1.23
      0.79   426.63    .117E+05     182.8          2.79       1.07
      0.94   426.79    .143E+05     251.2          3.13       0.95
      1.10   426.95    .170E+05     323.1          3.39       0.88
      1.26   427.10    .199E+05     394.0          3.52       0.84
      1.42   427.26    .232E+05     479.1          3.69       0.81
      1.57   427.42    .267E+05     577.3          3.86       0.77
      1.73   427.58    .304E+05     687.4          4.03       0.74
      1.89   427.73    .344E+05     808.6          4.20       0.71
      2.05   427.89    .387E+05     927.4          4.28       0.70
      2.23   428.07    .449E+05    1119.2          4.45       0.67
      2.41   428.25    .531E+05    1356.2          4.56       0.65
      2.59   428.43    .627E+05    1638.9          4.66       0.64
      2.77   428.61    .737E+05    1955.8          4.73       0.63
      2.95   428.79    .859E+05    2310.2          4.79       0.62
      3.13   428.97    .996E+05    2701.5          4.84       0.61

                                        <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 (******)     44.57     1.25    6.50   49.76      0.02      0.88
   OUTFLOW: ID= 1 (******)     44.57     1.25    6.50   49.76      0.02      0.88
```

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04591>
04592> ------------------------------------------------------------------------------
04593> --------------------
04594> | CALIB             |
04595> | NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
04596> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
04597> --------------------   U.H. Tp(hrs)=   0.19
04598>
04599>      Unit Hyd Qpeak  (cms)=   0.090
04600>
04601>      PEAK FLOW       (cms)=   0.056 (i)
04602>      TIME TO PEAK    (hrs)=   6.083
04603>      RUNOFF VOLUME    (mm)=  40.921
04604>      TOTAL RAINFALL   (mm)=  72.519
04605>      RUNOFF COEFFICIENT   =   0.564
04606>
04607>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04608>
04609> ------------------------------------------------------------------------------
04610> --------------------
04611> | CALIB             |
04612> | NASHYD   (******)|   Area    (ha)=  11.13   Curve Number   (CN)= 85.0
04613> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
04614> --------------------   U.H. Tp(hrs)=   0.42
04615>
04616>      Unit Hyd Qpeak  (cms)=   1.012
04617>
04618>      PEAK FLOW       (cms)=   0.829 (i)
04619>      TIME TO PEAK    (hrs)=   6.250
04620>      RUNOFF VOLUME    (mm)=  41.013
04621>      TOTAL RAINFALL   (mm)=  72.519
04622>      RUNOFF COEFFICIENT   =   0.566
04623>
04624>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04625>
04626> ------------------------------------------------------------------------------
04627> --------------------
04628> | CALIB             |
04629> | NASHYD   (******)|   Area    (ha)=   0.75   Curve Number   (CN)= 85.0
04630> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
04631> --------------------   U.H. Tp(hrs)=   0.22
04632>
04633>      Unit Hyd Qpeak  (cms)=   0.130
04634>
04635>      PEAK FLOW       (cms)=   0.087 (i)
04636>      TIME TO PEAK    (hrs)=   6.083
04637>      RUNOFF VOLUME    (mm)=  40.963
04638>      TOTAL RAINFALL   (mm)=  72.519
04639>      RUNOFF COEFFICIENT   =   0.565
04640>
04641>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04642>
04643> ------------------------------------------------------------------------------
04644> --------------------
04645> | CALIB             |
04646> | STANDHYD ( 40600)|   Area    (ha)=  78.37
04647> |ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
04648> --------------------
04649>                              IMPERVIOUS    PERVIOUS (i)
04650>      Surface Area     (ha)=      54.14        24.23
04651>      Dep. Storage     (mm)=       2.00         5.78
04652>      Average Slope     (%)=       1.20         1.20
04653>      Length            (m)=     722.82        47.00
04654>      Mannings n           =      0.015        0.260
04655>
04656>      Max.Eff.Inten.(mm/hr)=      95.56        93.60
04657>                over (min)       10.00        20.00
04658>      Storage Coeff.  (min)=       8.79 (ii)   18.32 (ii)
04659>      Unit Hyd. Tpeak (min)=      10.00        20.00
04660>      Unit Hyd. peak  (cms)=       0.12         0.06
04661>                                                        *TOTALS*
04662>      PEAK FLOW       (cms)=       9.59         3.20        11.862 (iii)
04663>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
04664>      RUNOFF VOLUME    (mm)=      70.52        40.34         57.32
04665>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
04666>      RUNOFF COEFFICIENT   =       0.97         0.56          0.79
04667>
04668>
04669>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04670>              CN*  =  79.0    Ia = Dep. Storage  (Above)
04671>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04672>            THAN THE STORAGE COEFFICIENT.
04673>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04674>
04675> ------------------------------------------------------------------------------
04676> --------------------
04677> | ROUTE CHN( 60600)|
04678> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
04679> --------------------
04680>                 <------ DATA FOR SECTION (   1.1) ------>
04681>                 Distance      Elevation       Manning
04682>                     0.00         144.07        0.0450
04683>                     9.00         143.84        0.0450
04684>                    12.00         142.90        0.0450
04685>                    15.00         142.48        0.0450
04686>                    18.00         142.43    0.0450 /0.0350  Main Channel
04687>                    21.00         142.31        0.0350      Main Channel
04688>                    24.00         142.12        0.0350      Main Channel
04689>                    27.00         142.44    0.0350 /0.0450  Main Channel
04690>                    30.00         142.71        0.0450
04691>                    33.00         143.18        0.0450
04692>                    36.00         143.27        0.0450
04693>                    37.00         143.36        0.0450
04694>                    38.00         143.64        0.0450
04695>                    39.00         143.92        0.0450
04696>                    40.00         143.93        0.0450
04697>                    45.00         144.18        0.0450
04698>
04699>       <---------------------- TRAVEL TIME TABLE ---------------------->
04700>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
04701>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
04702>         0.08   142.20    .282E+02        0.0          0.24      26.26
04703>         0.16   142.27    .113E+03        0.1          0.38      16.54
04704>         0.23   142.35    .257E+03        0.3          0.48      13.09
04705>         0.31   142.43    .477E+03        0.7          0.57      11.02
04706>         0.42   142.54    .969E+03        2.0          0.76       8.24
04707>         0.53   142.65    .157E+04        3.8          0.92       6.80
04708>         0.64   142.76    .224E+04        6.3          1.06       5.90
04709>         0.75   142.87    .299E+04        9.5          1.19       5.26
04710>         0.86   142.98    .379E+04       13.2          1.31       4.77
04711>         0.97   143.09    .463E+04       17.6          1.43       4.37
04712>         1.08   143.20    .552E+04       22.5          1.53       4.09
04713>         1.19   143.31    .653E+04       27.9          1.60       3.90
04714>         1.30   143.42    .761E+04       34.4          1.70       3.69
04715>         1.41   143.53    .874E+04       41.7          1.79       3.49
04716>         1.52   143.64    .989E+04       49.7          1.89       3.32
04717>         1.63   143.75    .111E+05       58.3          1.98       3.17
04718>         1.74   143.85    .123E+05       66.9          2.04       3.06
04719>         1.85   143.96    .137E+05       73.2          2.01       3.11
04720>         1.96   144.07    .153E+05       81.5          2.00       3.13
04721>
04722>                                    <---- hydrograph ---->   <-pipe / channel->
04723>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
04724>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
04725>    INFLOW : ID= 2 ( 40600)   78.37    11.86    6.00  57.32      0.82      1.27
04726>    OUTFLOW: ID= 1 ( 60600)   78.37    11.40    6.08  57.32      0.80      1.25
04727>
04728>
04729>
04730> ------------------------------------------------------------------------------
04731> --------------------
04732> | CALIB             |
04733> | STANDHYD ( 40610)|   Area    (ha)=   3.94
04734> |ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
04735> --------------------
04736>                              IMPERVIOUS    PERVIOUS (i)
04737>      Surface Area     (ha)=       1.75         2.18
04738>      Dep. Storage     (mm)=       2.00         8.00
04739>      Average Slope     (%)=       2.90         2.90
04740>      Length            (m)=     162.03        40.00
04741>      Mannings n           =      0.015        0.340
04742>
04743>      Max.Eff.Inten.(mm/hr)=      95.56        70.54
04744>                over (min)       5.00        15.00
04745>      Storage Coeff.  (min)=       2.75 (ii)   11.48 (ii)
04746>      Unit Hyd. Tpeak (min)=       5.00        15.00
04747>      Unit Hyd. peak  (cms)=       0.28         0.09
04748>                                                        *TOTALS*
04749>      PEAK FLOW       (cms)=       0.33         0.27          0.566 (iii)
04750>      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
04751>      RUNOFF VOLUME    (mm)=      70.52        34.05         45.58
04752>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
04753>      RUNOFF COEFFICIENT   =       0.97         0.47          0.63
04754>
04755> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
04756>
04757>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04758>              CN*  =  76.9    Ia = Dep. Storage  (Above)
04759>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04760>            THAN THE STORAGE COEFFICIENT.
04761>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04762>
04763> ------------------------------------------------------------------------------
04764>
04765> --------------------
04766> | ADD HYD  ( 50600)|
04767> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04768> --------------------         (ha)    (cms)    (hrs)     (mm)
04769>        ID1= 1 ( 40610):     3.94    0.566     6.00    45.58
04770>      + ID2= 2 ( 60600):    78.37   11.396     6.08    57.32
04771>        ==================================================
04772>        ID = 3 ( 50600):    82.31   11.758     6.08    56.76
04773>
04774>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04775> ------------------------------------------------------------------------------
04776> --------------------
04777> | ROUTE CHN( 60610)|
04778> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
04779> --------------------
04780>                 <------ DATA FOR SECTION (   1.1) ------>
04781>                 Distance      Elevation       Manning
04782>                     0.00         143.40        0.0450
04783>                     2.00         142.92        0.0450
04784>                     4.00         142.14        0.0450
04785>                     6.00         141.49        0.0450
04786>                     8.00         141.11        0.0450
04787>                    10.00         141.00    0.0450 /0.0350  Main Channel
04788>                    12.00         140.98        0.0350      Main Channel
04789>                    14.00         140.82        0.0350      Main Channel
04790>                    16.00         141.02    0.0350 /0.0450  Main Channel
04791>                    18.00         141.19        0.0450
04792>                    20.00         141.19        0.0450
04793>                    22.00         141.44        0.0450
04794>                    24.00         142.00        0.0450
04795>                    26.00         142.20        0.0450
04796>                    28.00         142.39        0.0450
04797>                    30.00         142.96        0.0450
04798>                    31.00         143.13        0.0450
04799>                    32.00         143.28        0.0450
04800>                    33.00         143.41        0.0450
04801>                    34.00         143.44        0.0450
04802>
04803>       <---------------------- TRAVEL TIME TABLE ---------------------->
04804>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
04805>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
04806>         0.09   140.91    .314E+02        0.0          0.24      23.12
04807>         0.18   141.00    .132E+03        0.1          0.31      17.83
04808>         0.33   141.14    .502E+03        0.9          0.58       9.54
04809>         0.47   141.29    .107E+04        2.4          0.74       7.47
04810>         0.61   141.43    .175E+04        4.7          0.89       6.20
04811>         0.75   141.57    .251E+04        7.9          1.05       5.31
04812>         0.89   141.71    .332E+04       11.8          1.19       4.68
04813>         1.03   141.85    .416E+04       16.5          1.32       4.21
04814>         1.17   141.99    .506E+04       21.8          1.44       3.86
04815>         1.31   142.13    .601E+04       27.5          1.52       3.64
04816>         1.45   142.27    .705E+04       34.0          1.61       3.46
04817>         1.59   142.41    .818E+04       41.5          1.69       3.29
04818>         1.73   142.55    .936E+04       50.2          1.79       3.11
04819>         1.88   142.69    .106E+05       59.8          1.88       2.95
04820>         2.02   142.84    .118E+05       70.2          1.97       2.81
04821>         2.16   142.98    .132E+05       81.2          2.06       2.70
04822>         2.30   143.12    .145E+05       92.6          2.12       2.61
04823>         2.44   143.26    .159E+05      104.8          2.19       2.54
04824>         2.58   143.40    .174E+05      117.7          2.24       2.47
04825>
04826>                                    <---- hydrograph ---->   <-pipe / channel->
04827>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
04828>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
04829>    INFLOW : ID= 2 ( 50600)   82.31    11.76    6.08  56.76      0.89      1.18
04830>    OUTFLOW: ID= 1 ( 60610)   82.31    11.11    6.17  56.76      0.86      1.16
04831>
04832>
04833>
04834> ------------------------------------------------------------------------------
04835> --------------------
04836> | CALIB             |
04837> | STANDHYD ( 40620)|   Area    (ha)=   5.67
04838> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
04839> --------------------
04840>                              IMPERVIOUS    PERVIOUS (i)
04841>      Surface Area     (ha)=       4.30         1.37
04842>      Dep. Storage     (mm)=       2.00         5.59
04843>      Average Slope     (%)=       1.50         1.50
04844>      Length            (m)=     194.41        43.00
04845>      Mannings n           =      0.015        0.270
04846>
04847>      Max.Eff.Inten.(mm/hr)=      95.56       114.16
04848>                over (min)       5.00        15.00
04849>      Storage Coeff.  (min)=       3.74 (ii)   11.72 (ii)
04850>      Unit Hyd. Tpeak (min)=       5.00        15.00
04851>      Unit Hyd. peak  (cms)=       0.25         0.09
04852>                                                        *TOTALS*
04853>      PEAK FLOW       (cms)=       0.90         0.28          1.153 (iii)
04854>      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
04855>      RUNOFF VOLUME    (mm)=      70.52        43.15         59.75
04856>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
04857>      RUNOFF COEFFICIENT   =       0.97         0.60          0.82
04858>
04859> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
04860>
04861>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04862>              CN*  =  79.0    Ia = Dep. Storage  (Above)
04863>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04864>            THAN THE STORAGE COEFFICIENT.
04865>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04866>
04867> ------------------------------------------------------------------------------
04868>
04869> --------------------
04870> | ADD HYD  ( 50610)|
04871> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04872> --------------------         (ha)    (cms)    (hrs)     (mm)
04873>        ID1= 1 ( 40620):     5.67    1.153     6.00    59.75
04874>      + ID2= 2 ( 60610):    82.31   11.107     6.17    56.76
04875>        ==================================================
04876>        ID = 3 ( 50610):    87.98   11.548     6.17    56.95
04877>
04878>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04879> ------------------------------------------------------------------------------
04880> --------------------
04881> | ROUTE CHN( 60620)|
04882> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
04883> --------------------
04884>                 <------ DATA FOR SECTION (   1.1) ------>
04885>                 Distance      Elevation       Manning
04886>                     0.00         142.03        0.0450
04887>                     1.00         141.71        0.0450
04888>                     2.00         141.35        0.0450
04889>                     3.00         141.01        0.0450
04890>                     4.00         140.79        0.0450
04891>                     5.00         140.56        0.0450
04892>                     6.00         140.44        0.0450
04893>                     7.00         140.30    0.0450 /0.0350  Main Channel
04894>                     8.00         140.08        0.0350      Main Channel
04895>                     9.00         139.88        0.0350      Main Channel
04896>                    10.00         139.97        0.0350      Main Channel
```

```
                  11.00        140.12        0.0350      Main Channel
                  12.00        140.35    0.0350 /0.0450  Main Channel
                  13.00        140.52        0.0450
                  14.00        140.73        0.0450
                  15.00        140.97        0.0450
                  16.00        141.27        0.0450
                  17.00        141.57        0.0450
                  18.00        141.89        0.0450
                  19.00        142.07        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.10    139.99    .161E+02       0.0          0.36       8.21
       0.21    140.09    .579E+02       0.2          0.59       5.04
       0.31    140.19    .120E+03       0.5          0.78       3.79
       0.42    140.30    .200E+03       1.1          0.95       3.12
       0.53    140.41    .313E+03       2.1          1.18       2.51
       0.65    140.53    .456E+03       3.5          1.36       2.18
       0.76    140.65    .630E+03       5.3          1.50       1.98
       0.88    140.76    .826E+03       7.6          1.63       1.82
       0.99    140.88    .104E+04      10.3          1.75       1.69
       1.11    140.99    .128E+04      13.4          1.87       1.59
       1.23    141.11    .154E+04      17.1          1.98       1.50
       1.34    141.22    .180E+04      21.2          2.09       1.42
       1.46    141.34    .209E+04      25.8          2.20       1.35
       1.57    141.45    .239E+04      30.9          2.30       1.29
       1.69    141.57    .270E+04      36.4          2.40       1.24
       1.80    141.69    .303E+04      42.4          2.49       1.19
       1.92    141.80    .337E+04      48.9          2.58       1.15
       2.04    141.92    .373E+04      55.9          2.67       1.11
       2.15    142.03    .411E+04      63.2          2.74       1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 ( 50610)   87.98    11.55    6.17  56.95      1.04      1.80
   OUTFLOW: ID= 1 ( 60620)   87.98    11.61    6.17  56.95      1.04      1.80


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n            =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      95.56        64.99
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.69 (ii)   13.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.18         0.14       0.298 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08       6.00
     RUNOFF VOLUME    (mm)=      70.52        34.71      46.02
     TOTAL RAINFALL   (mm)=      72.52        72.52      72.52
     RUNOFF COEFFICIENT   =       0.97         0.48       0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40640):     2.13   0.298     6.00    46.02
     + ID2= 2 ( 60620):    87.98  11.613     6.17    56.95
       ================================================
       ID = 3 ( 50630):    90.11  11.776     6.17    56.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n            =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      95.56        84.86
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       5.62 (ii)   14.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.20         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.74         1.02       3.625 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08       6.00
     RUNOFF VOLUME    (mm)=      70.52        39.20      55.69
     TOTAL RAINFALL   (mm)=      72.52        72.52      72.52
     RUNOFF COEFFICIENT   =       0.97         0.54       0.77


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 ( 40640):    20.54   3.625     6.00    55.69
     + ID2= 2 ( 50630):    90.11  11.776     6.17    56.69
       ================================================
       ID = 3 ( 50640):   110.65  13.548     6.17    56.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.5060
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50640)    110.646     13.548      6.17      56.50
   OUTFLOW: ID= 1 (******)    110.646      2.392      7.08      56.47
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 17.65
                  TIME SHIFT OF PEAK FLOW         (min)= 55.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  3.9662

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  --------------------------
  | Junction Command(30651005) |
  --------------------------

                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651001)    0.00     0.00    0.00      0.00
  OUTFLOW: ID= 2(30651005)    0.00     0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
       ID1= 1 (******):   110.65   2.392     7.08    56.47
     + ID2= 2 (******):     0.00   0.000     0.00     0.00
       ================================================
       ID = 3 (******):   110.65   2.392     7.08    56.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 3 (******):   110.65   2.392     7.08    56.47
     + ID2= 2 (******):     0.75   0.087     6.08    40.96
       ================================================
       ID = 1 (******):   111.40   2.402     7.08    56.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):    11.13   0.829     6.25    41.01
     + ID2= 2 (******):   111.40   2.402     7.08    56.37
       ================================================
       ID = 3 (******):   122.53   2.765     6.92    54.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         447.10         0.0450
                 42.83         446.80         0.0450
                 42.89         446.80         0.0450
                 43.24         446.79         0.0450
                122.57         446.48         0.0450
                154.02         446.22         0.0450
                191.79         446.32    0.0450 /0.0350  Main Channel
                199.05         442.27         0.0350      Main Channel
                199.74         442.33         0.0350      Main Channel
                212.02         444.19         0.0350      Main Channel
                232.17         444.54    0.0350 /0.0450  Main Channel
                348.58         444.42         0.0450
                359.23         444.30         0.0450
                381.33         444.03         0.0450
                483.65         444.18         0.0450
                548.64         445.87         0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.19    442.46    .184E+03       0.1          0.65      24.29
       0.38    442.65    .662E+03       0.7          1.01      15.64
       0.57    442.84    .143E+04       2.0          1.31      12.09
       0.76    443.03    .247E+04       4.1          1.57      10.05
       0.95    443.22    .381E+04       7.3          1.81       8.70
       1.14    443.41    .543E+04      11.7          2.04       7.73
       1.33    443.60    .733E+04      17.5          2.26       6.99
       1.52    443.79    .952E+04      24.8          2.46       6.41
       1.71    443.98    .120E+05      33.7          2.66       5.93
       1.89    444.16    .211E+05      47.0          2.11       7.49
       2.08    444.35    .469E+05      73.0          1.47      10.71
       2.27    444.54    .855E+05     117.6          1.30      12.12
       2.46    444.73    .140E+06     240.0          1.62       9.75
       2.65    444.92    .197E+06     400.4          1.92       8.20
       2.84    445.11    .255E+06     595.0          2.21       7.13
       3.03    445.30    .314E+06     821.8          2.48       6.37
       3.22    445.49    .374E+06    1079.2          2.73       5.78
       3.41    445.68    .436E+06    1366.3          2.96       5.32
       3.60    445.87    .500E+06    1682.3          3.19       4.95

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
   INFLOW : ID= 2 (******)   122.53     2.76    6.92  54.97      0.64      1.39
   OUTFLOW: ID= 1 (******)   122.53     2.71    7.08  54.97      0.63      1.39


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.174

     PEAK FLOW       (cms)=   0.119 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.971
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.10   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.121 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.978
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.99
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
```

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      Surface Area     (ha)=       1.50         1.50
      Dep. Storage     (mm)=       2.00         4.13
      Average Slope     (%)=       1.00        20.00
      Length            (m)=      15.00        15.00
      Mannings n           =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=      95.56       167.04
                  over (min)       5.00         5.00
      Storage Coeff.  (min)=       0.83 (ii)    3.24 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.27
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.01         0.69          0.703 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      70.52        54.33          54.49
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.75           0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  17.55
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      14.39         3.16
      Dep. Storage     (mm)=       2.00         4.13
      Average Slope     (%)=       1.00         2.00
      Length            (m)=      30.00        30.00
      Mannings n           =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=      95.56       295.81
                  over (min)       5.00         5.00
      Storage Coeff.  (min)=       1.26 (ii)    2.36 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.33         0.30
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.91         2.61          4.519 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      70.52        60.54          64.63
      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
      RUNOFF COEFFICIENT   =       0.97         0.83           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.05    0.119     6.08    40.97
      + ID2= 2 (******):     1.10    0.121     6.08    40.98
        ================================================
        ID = 3 (******):     2.15    0.240     6.08    40.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.15    0.240     6.08    40.97
      + ID2= 2 (******):    17.55    4.519     6.00    64.63
        ================================================
        ID = 1 (******):    19.70    4.731     6.00    62.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    19.70    4.731     6.00    62.05
      + ID2= 2 (******):     2.99    0.703     6.00    54.49
        ================================================
        ID = 3 (******):    22.69    5.434     6.00    61.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    22.69    5.434     6.00    61.05
      + ID2= 2 (******):     0.34    0.253     6.00    61.72
        ================================================
        ID = 1 (******):    23.03    5.687     6.00    61.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    23.03    5.687     6.00    61.06
      + ID2= 2 (******):     0.74    0.562     6.00    64.63
        ================================================
        ID = 3 (******):    23.78    6.248     6.00    61.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.3352      3.1110
                          0.0933      0.5687   |    0.3714      3.8158
                          0.1848      1.1636   |    0.4043      4.5492
                          0.2439      1.7854   |    0.4445      5.5626
                          0.2910      2.4344   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)    23.778     6.248      6.00      61.18
   OUTFLOW: ID= 1 (******)    23.778     0.178      8.08      61.11
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.85
                  TIME SHIFT OF PEAK FLOW          (min)=125.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.1213

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30651004) |
  --------------------------
```

```
                               AREA     QPEAK   TPEAK     R.V.
                               (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3(30651002)     0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2(30651004)     0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    23.78    0.178     8.08    61.11
      + ID2= 2 (******):     0.00    0.000     0.00     0.00
        ================================================
        ID = 3 (******):    23.78    0.178     8.08    61.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    23.78    0.178     8.08    61.11
      + ID2= 2 (******):     0.45    0.056     6.08    40.92
        ================================================
        ID = 1 (******):    24.23    0.204     6.08    60.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    24.23    0.204     6.08    60.74
      + ID2= 2 (******):   122.53    2.708     7.08    54.97
        ================================================
        ID = 3 (******):   146.75    2.888     7.08    55.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.220 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.993
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.19    0.220     6.08    40.99
      + ID2= 2 (******):   146.75    2.888     7.08    55.92
        ================================================
        ID = 3 (******):   148.94    2.923     7.08    55.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         429.12        0.0450
                   37.54         428.86        0.0450
                   53.31         428.70        0.0450
                   81.17         428.24        0.0450
                   99.28         428.15    0.0450 /0.0350  Main Channel
                  114.53         427.72        0.0350      Main Channel
                  119.88         426.51        0.0350      Main Channel
                  124.17         425.84        0.0350      Main Channel
                  206.01         425.90        0.0350      Main Channel
                  209.64         426.51        0.0350      Main Channel
                  214.21         426.89        0.0350      Main Channel
                  231.49         427.17        0.0350      Main Channel
                  268.61         427.89    0.0350 /0.0450  Main Channel
                  351.58         428.15        0.0450
                  368.27         428.31        0.0450
                  405.75         428.52        0.0450
                  416.79         428.59        0.0450
                  440.06         428.76        0.0450
                  469.88         428.97        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.16   426.00    .218E+04       4.1         0.39       8.87
        0.31   426.16    .495E+04      15.8         0.67       5.22
        0.47   426.32    .779E+04      33.2         0.89       3.92
        0.63   426.47    .107E+05      55.4         1.08       3.22
        0.79   426.63    .137E+05      81.8         1.25       2.78
        0.94   426.79    .167E+05     112.4         1.40       2.48
        1.10   426.95    .199E+05     144.6         1.52       2.29
        1.26   427.10    .233E+05     176.4         1.58       2.20
        1.42   427.26    .271E+05     214.5         1.65       2.11
        1.57   427.42    .312E+05     258.4         1.73       2.01
        1.73   427.58    .356E+05     307.7         1.81       1.93
        1.89   427.73    .402E+05     362.0         1.88       1.85
        2.05   427.89    .452E+05     415.1         1.91       1.82
        2.23   428.07    .525E+05     501.3         1.99       1.74
        2.41   428.25    .621E+05     609.1         2.05       1.70
        2.59   428.43    .733E+05     739.1         2.10       1.65
        2.77   428.61    .862E+05     886.8         2.15       1.62
        2.95   428.79    .101E+06    1053.9         2.19       1.59
        3.13   428.97    .116E+06    1240.2         2.22       1.57

                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)    148.94     2.92     7.08    55.70      0.11       0.39
   OUTFLOW: ID= 1 (******)    148.94     2.88     7.25    55.70      0.11       0.39


--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    148.94    2.878     7.25    55.70
      + ID2= 2 (******):     44.57    1.245     6.50    49.76
        ================================================
        ID = 3 (******):    193.52    3.999     7.17    54.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.030 (i)
     TIME TO PEAK    (hrs)=   6.000
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```
      RUNOFF VOLUME    (mm)=  40.831
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.563

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.22   0.030     6.00    40.83
       + ID2= 2 (******):     8.69   1.190     6.58    51.35
         ================================================
         ID = 3 (******):     8.91   1.196     6.58    51.09

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        433.07        0.0450
                   59.66        432.39        0.0450
                   94.25        432.03        0.0450
                  115.71        431.82        0.0450
                  143.84        431.84    0.0450 /0.0350  Main Channel
                  163.59        431.75        0.0350      Main Channel
                  177.84        431.73        0.0350      Main Channel
                  199.51        431.70        0.0350      Main Channel
                  231.74        431.53        0.0350      Main Channel
                  283.71        431.44        0.0350      Main Channel
                  294.09        431.43        0.0350      Main Channel
                  325.65        431.42        0.0350      Main Channel
                  355.24        431.24        0.0350      Main Channel
                  383.70        431.43        0.0350      Main Channel
                  476.17        432.06    0.0350 /0.0450  Main Channel
                  510.88        432.23        0.0450
                  558.61        432.37        0.0450
                  589.84        432.57        0.0450
                  622.97        432.73        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.08  431.32    .108E+03        0.3         0.30       6.68
         0.15  431.39    .434E+03        1.7         0.47       4.21
         0.23  431.47    .119E+04        5.0         0.50       3.99
         0.30  431.54    .252E+04       13.9         0.66       3.02
         0.38  431.62    .417E+04       29.3         0.84       2.37
         0.45  431.69    .604E+04       50.1         0.99       2.01
         0.53  431.77    .828E+04       73.9         1.06       1.87
         0.60  431.84    .109E+05      108.8         1.19       1.67
         0.68  431.92    .142E+05      159.5         1.34       1.48
         0.76  432.01    .176E+05      219.4         1.48       1.34
         0.84  432.09    .213E+05      290.0         1.62       1.22
         0.92  432.17    .252E+05      374.6         1.77       1.12
         1.01  432.25    .293E+05      469.2         1.91       1.04
         1.09  432.33    .338E+05      573.9         2.02       0.98
         1.17  432.41    .386E+05      689.9         2.13       0.93
         1.25  432.49    .435E+05      817.2         2.24       0.89
         1.33  432.57    .487E+05      955.3         2.34       0.85
         1.41  432.65    .541E+05     1103.5         2.43       0.82
         1.49  432.73    .597E+05     1262.7         2.52       0.79

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    8.91     1.20    6.58  51.09      0.12       0.39
   OUTFLOW: ID= 1 (******)    8.91     1.19    6.58  51.09      0.12       0.39

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.062 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  40.832
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.563

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.343 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  41.006
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     3.87   0.343     6.17    41.01
       + ID2= 2 (******):     0.45   0.062     6.00    40.83
         ================================================
         ID = 3 (******):     4.32   0.387     6.17    40.99

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     4.32   0.387     6.17    40.99
       + ID2= 2 (******):     8.91   1.188     6.58    51.09
         ================================================
         ID = 1 (******):    13.23   1.409     6.58    47.79

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        430.79        0.0450
                   23.82        429.79    0.0450 /0.0350  Main Channel
                   44.05        429.11        0.0350      Main Channel
                   70.46        428.15        0.0350      Main Channel
                  112.31        427.60        0.0350      Main Channel
                  150.77        427.27        0.0350      Main Channel
                  179.17        427.15        0.0350      Main Channel
                  214.90        427.16        0.0350      Main Channel
                  261.89        427.25        0.0350      Main Channel
                  317.65        427.56        0.0350      Main Channel
                  382.75        427.99        0.0350      Main Channel
                  394.40        428.11        0.0350      Main Channel
                  432.80        428.07        0.0350      Main Channel
                  432.91        428.07        0.0350      Main Channel
                  462.57        428.15        0.0350      Main Channel
                  522.90        429.79    0.0350 /0.0450  Main Channel
                  585.04        429.90        0.0450
                  731.92        430.62        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.18  427.33    .207E+04       11.5         0.73       2.99
         0.35  427.50    .570E+04       49.9         1.15       1.91
         0.53  427.68    .105E+05      119.2         1.49       1.47
         0.70  427.85    .163E+05      221.8         1.79       1.22
         0.88  428.03    .229E+05      360.8         2.06       1.06
         1.06  428.21    .312E+05      509.7         2.14       1.02
         1.23  428.38    .405E+05      771.0         2.49       0.88
         1.41  428.56    .500E+05     1076.3         2.82       0.77
         1.58  428.73    .598E+05     1423.8         3.12       0.70
         1.76  428.91    .699E+05     1812.5         3.40       0.64
         1.94  429.09    .802E+05     2241.5         3.66       0.60
         2.11  429.26    .907E+05     2709.1         3.91       0.56
         2.29  429.44    .102E+06     3215.8         4.15       0.53
         2.46  429.61    .113E+06     3761.6         4.38       0.50
         2.64  429.79    .124E+06     4346.4         4.59       0.48
         2.85  430.00    .139E+06     5173.9         4.88       0.45
         3.06  430.20    .156E+06     6075.9         5.12       0.43
         3.26  430.41    .173E+06     7054.9         5.33       0.41
         3.47  430.62    .193E+06     8114.3         5.52       0.40

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    13.23     1.41    6.58  47.79      0.02       0.73
   OUTFLOW: ID= 1 (******)    13.23     1.39    6.58  47.79      0.02       0.73

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.110 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.971
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.565

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.088 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  40.899
     TOTAL RAINFALL   (mm)=  72.519
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.69   0.088     6.08    40.90
       + ID2= 2 (******):     0.97   0.110     6.08    40.97
         ================================================
         ID = 3 (******):     1.66   0.197     6.08    40.94

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     1.66   0.197     6.08    40.94
       + ID2= 2 (******):    13.23   1.394     6.58    47.79
         ================================================
         ID = 3 (******):    14.89   1.452     6.58    47.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         1.00     0.00     0.00     0.00     0.00     1.00
       100.00     0.00     0.00     0.00     0.00   100.00

                                AREA     QPEAK     TPEAK     R.V.
                                (ha)     (cms)     (hrs)     (mm)
      TOTAL HYD.(ID= 1):  14.89      1.45      6.58    47.02
      ================================================
      ID= 2  (   2)    :  14.89      1.45      6.58    47.02
      ID= 3  (   2)    :   0.00      0.00      6.58    47.02
      ID= 4  (   2)    :   0.00      0.00      0.00     0.00
      ID= 5  (   2)    :   0.00      0.00      0.00     0.00
      ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.96          0.25
      Dep. Storage     (mm)=       2.00          4.48
      Average Slope     (%)=       0.64          0.54
      Length            (m)=      63.89        157.20
      Mannings n             =     0.013         0.030

      Max.Eff.Inten.(mm/hr)=      95.56         67.47
                  over (min)        5.00         10.00
      Storage Coeff.  (min)=       2.27 (ii)     6.26 (ii)
      Unit Hyd. Tpeak (min)=       5.00         10.00
      Unit Hyd. peak  (cms)=       0.30          0.15
                                                              *TOTALS*
      PEAK FLOW       (cms)=       0.25          0.04          0.294 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.00          6.00
      RUNOFF VOLUME    (mm)=      70.52         41.02         64.32
      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
      RUNOFF COEFFICIENT   =       0.97          0.57          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
05815> ------------------------------------------------------------------------------
05816> --------------------
05817> | CALIB            |
05818> | STANDHYD (******)|   Area    (ha)=   2.90
05819> |ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
05820> --------------------
05821>                              IMPERVIOUS    PERVIOUS (i)
05822>      Surface Area     (ha)=       2.32         0.58
05823>      Dep. Storage     (mm)=       2.00         4.48
05824>      Average Slope     (%)=       0.70         0.60
05825>      Length            (m)=     166.18       124.91
05826>      Mannings n           =      0.013        0.030
05827>
05828>      Max.Eff.Inten.(mm/hr)=      95.56        67.47
05829>                 over (min)       5.00        10.00
05830>      Storage Coeff.  (min)=       3.93 (ii)    7.21 (ii)
05831>      Unit Hyd. Tpeak (min)=       5.00        10.00
05832>      Unit Hyd. peak  (cms)=       0.24         0.14
05833>                                                          *TOTALS*
05834>      PEAK FLOW       (cms)=       0.61         0.09          0.695 (iii)
05835>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
05836>      RUNOFF VOLUME    (mm)=      70.52        41.02          64.62
05837>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
05838>      RUNOFF COEFFICIENT   =       0.97         0.57           0.89
05839>
05840> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05841>
05842>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05843>            CN*  =  85.0    Ia = Dep. Storage  (Above)
05844>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05845>            THAN THE STORAGE COEFFICIENT.
05846>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05847>
05848> ------------------------------------------------------------------------------
05849>
05850> --------------------
05851> | ADD HYD  (******)|
05852> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05853> --------------------         (ha)    (cms)    (hrs)     (mm)
05854>        ID1= 1 (******):     2.90   0.695     6.00    64.62
05855>      + ID2= 2 (******):     1.21   0.294     6.00    64.32
05856>        ====================================================
05857>        ID = 3 (******):     4.11   0.989     6.00    64.53
05858>
05859>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05860> ------------------------------------------------------------------------------
05861> --------------------
05862> | DIVERTHYD(******)|
05863> | IN= 1   # OUT= 5 |
05864> --------------------
05865>      Outflow / Inflow  Relationships
05866>
05867>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05868>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05869>        0.00     0.00     0.00     0.00     0.00     0.00
05870>        0.85     0.00     0.00     0.00     0.00     0.85
05871>        0.85     1.00     0.00     0.00     0.00     1.85
05872>        0.85   100.00     0.00     0.00     0.00   100.85
05873>
05874>                            AREA     QPEAK     TPEAK    R.V.
05875>                            (ha)     (cms)     (hrs)    (mm)
05876>      TOTAL HYD.(ID= 1):   4.11      0.99      6.00   64.53
05877>      ====================================================
05878>      ID= 2  (   2)    :   4.00      0.85      6.00   64.53
05879>      ID= 3  (   2)    :   0.11      0.14      6.00   64.53
05880>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
05881>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
05882>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
05883> ------------------------------------------------------------------------------
05884>
05885> --------------------
05886> | ADD HYD  (******)|
05887> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05888> --------------------         (ha)    (cms)    (hrs)     (mm)
05889>        ID1= 1 (******):     0.00   0.000     6.58    47.02
05890>      + ID2= 2 (******):     4.00   0.847     6.00    64.53
05891>        ====================================================
05892>        ID = 3 (******):     4.00   0.847     6.00    64.53
05893>
05894>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05895> ------------------------------------------------------------------------------
05896> --------------------
05897> | DIVERTHYD(******)|
05898> | IN= 1   # OUT= 5 |
05899> --------------------
05900>      Outflow / Inflow  Relationships
05901>
05902>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05903>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05904>        0.00     0.00     0.00     0.00     0.00     0.00
05905>        0.00     5.20     0.00     0.00     0.00     5.20
05906>        1.00     5.20     0.00     0.00     0.00     6.20
05907>      100.00     5.20     0.00     0.00     0.00   105.20
05908>
05909>                            AREA     QPEAK     TPEAK    R.V.
05910>                            (ha)     (cms)     (hrs)    (mm)
05911>      TOTAL HYD.(ID= 1):   4.00      0.85      6.00   64.53
05912>      ====================================================
05913>      ID= 2  (   2)    :   0.00      0.00      6.00   64.53
05914>      ID= 3  (   2)    :   4.00      0.85      6.00   64.53
05915>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
05916>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
05917>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
05918> ------------------------------------------------------------------------------
05919>
05920> --------------------
05921> | ADD HYD  (******)|
05922> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05923> --------------------         (ha)    (cms)    (hrs)     (mm)
05924>        ID1= 1 (******):    14.89   1.452     6.58    47.02
05925>      + ID2= 2 (******):     0.00   0.000     6.00    64.53
05926>        ====================================================
05927>        ID = 3 (******):    14.89   1.452     6.58    47.02
05928>
05929>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05930> ------------------------------------------------------------------------------
05931> --------------------
05932> | DIVERTHYD(******)|
05933> | IN= 1   # OUT= 5 |
05934> --------------------
05935>      Outflow / Inflow  Relationships
05936>
05937>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05938>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05939>        0.00     0.00     0.00     0.00     0.00     0.00
05940>        1.00     0.00     0.00     0.00     0.00     1.00
05941>      100.00     0.00     0.00     0.00     0.00   100.00
05942>
05943>                            AREA     QPEAK     TPEAK    R.V.
05944>                            (ha)     (cms)     (hrs)    (mm)
05945>      TOTAL HYD.(ID= 1):  14.89      1.45      6.58   47.02
05946>      ====================================================
05947>      ID= 2  (   2)    :  14.89      1.45      6.58   47.02
05948>      ID= 3  (   2)    :   0.00      0.00      6.58   47.02
05949>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
05950>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
05951>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
05952> ------------------------------------------------------------------------------
05953> --------------------
05954> | DIVERTHYD(******)|
05955> | IN= 1   # OUT= 5 |
05956> --------------------
05957>      Outflow / Inflow  Relationships
05958>
05959>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05960>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05961>        0.00     0.00     0.00     0.00     0.00     0.00
05962>        0.00     0.00     0.00     0.00     0.00     0.00
05963>        0.01     0.00     0.00     0.00     0.00     0.01
05964>        0.06     0.00     0.00     0.00     0.00     0.06
05965>        0.08     0.00     0.00     0.00     0.00     0.08
05966>        0.12     0.00     0.00     0.00     0.00     0.12
05967>        0.20     0.00     0.00     0.00     0.00     0.20
05968>        0.25     0.00     0.00     0.00     0.00     0.25
05969>        0.30     0.00     0.00     0.00     0.00     0.30
05970>        0.33     0.00     0.00     0.00     0.00     0.33
05971>        0.37     0.00     0.00     0.00     0.00     0.37
05972>        0.39     0.00     0.00     0.00     0.00     0.39
05973>        0.42     1.43     0.00     0.00     0.00     1.85
05974>        0.44     8.83     0.00     0.00     0.00     9.27
05975>        0.47    25.03     0.00     0.00     0.00    25.50
05976>        0.49    52.11     0.00     0.00     0.00    52.61
05977>        0.52    91.81     0.00     0.00     0.00    92.33
05978>        0.53   126.04     0.00     0.00     0.00   126.57
05979>
05980>                            AREA     QPEAK     TPEAK    R.V.
05981>                            (ha)     (cms)     (hrs)    (mm)
05982>      TOTAL HYD.(ID= 1):  14.89      1.45      6.58   47.02
05983>      ====================================================
05984>      ID= 2  (   2)    :   7.69      0.41      6.58   47.02
05985>      ID= 3  (   2)    :   7.19      1.04      6.58   47.02
05986>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
05987>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
05988>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
05989> ------------------------------------------------------------------------------
05990> --------------------
05991> | CALIB            |
05992> | STANDHYD (******)|   Area    (ha)=   0.82
05993> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
05994> --------------------
05995>                              IMPERVIOUS    PERVIOUS (i)
05996>      Surface Area     (ha)=       0.81         0.01
05997>      Dep. Storage     (mm)=       2.00         4.48
05998>      Average Slope     (%)=       0.50         1.00
05999>      Length            (m)=      18.40         0.10
06000>      Mannings n           =      0.013        0.030
06001>
06002>      Max.Eff.Inten.(mm/hr)=      95.56        67.47
06003>                 over (min)       5.00         5.00
06004>      Storage Coeff.  (min)=       1.16 (ii)    1.17 (ii)
06005>      Unit Hyd. Tpeak (min)=       5.00         5.00
06006>      Unit Hyd. peak  (cms)=       0.34         0.34
06007>                                                          *TOTALS*
06008>      PEAK FLOW       (cms)=       0.22         0.00          0.217 (iii)
06009>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
06010>      RUNOFF VOLUME    (mm)=      70.52        41.02          70.22
06011>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
06012>      RUNOFF COEFFICIENT   =       0.97         0.57           0.97
06013>
06014> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
06015>
06016>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06017>            CN*  =  85.0    Ia = Dep. Storage  (Above)
06018>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06019>            THAN THE STORAGE COEFFICIENT.
06020>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06021>
06022> ------------------------------------------------------------------------------
06023>
06024> --------------------
06025> | ADD HYD  (******)|
06026> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
06027> --------------------         (ha)    (cms)    (hrs)     (mm)
06028>        ID1= 1 (******):     0.82   0.217     6.00    70.22
06029>      + ID2= 2 (******):     0.00   0.000     6.58    47.02
06030>        ====================================================
06031>        ID = 3 (******):     0.82   0.217     6.00    70.22
06032>
06033>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06034> ------------------------------------------------------------------------------
06035>
06036> --------------------
06037> | ADD HYD  (******)|
06038> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
06039> --------------------         (ha)    (cms)    (hrs)     (mm)
06040>        ID1= 3 (******):     0.82   0.217     6.00    70.22
06041>      + ID2= 2 (******):     7.19   1.042     6.58    47.02
06042>        ====================================================
06043>        ID = 1 (******):     8.01   1.055     6.58    49.40
06044>
06045>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06046> ------------------------------------------------------------------------------
06047> --------------------
06048> | DIVERTHYD(******)|
06049> | IN= 1   # OUT= 5 |
06050> --------------------
06051>      Outflow / Inflow  Relationships
06052>
06053>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
06054>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
06055>        0.00     0.00     0.00     0.00     0.00     0.00
06056>        0.00     0.00     0.00     0.00     0.00     0.00
06057>        0.03     0.00     0.00     0.00     0.00     0.03
06058>        0.04     0.00     0.00     0.00     0.00     0.04
06059>        0.09     0.00     0.00     0.00     0.00     0.09
06060>        0.12     0.00     0.00     0.00     0.00     0.13
06061>        0.20     0.00     0.00     0.00     0.00     0.20
06062>        0.30     0.00     0.00     0.00     0.00     0.30
06063>        0.37     0.00     0.00     0.00     0.00     0.37
06064>        0.43     0.00     0.00     0.00     0.00     0.43
06065>        0.48     0.00     0.00     0.00     0.00     0.48
06066>        0.52     0.00     0.00     0.00     0.00     0.52
06067>        0.57     0.00     0.00     0.00     0.00     0.57
06068>        0.67     0.00     0.00     0.00     0.00     0.67
06069>        0.68     0.00     0.00     0.00     0.00     0.68
06070>        0.68     0.02     0.00     0.00     0.00     0.70
06071>        0.72     0.56     0.00     0.00     0.00     1.28
06072>        0.73     0.75     0.01     0.00     0.00     1.48
06073>        1.10     1.87     0.54     0.00     0.00     3.51
06074>        1.40     2.25     2.61     0.00     0.00     6.26
06075>
06076>                            AREA     QPEAK     TPEAK    R.V.
06077>                            (ha)     (cms)     (hrs)    (mm)
06078>      TOTAL HYD.(ID= 1):   8.01      1.06      6.58   49.40
06079>      ====================================================
06080>      ID= 2  (   3)    :   6.86      0.71      6.58   49.40
06081>      ID= 3  (   3)    :   1.15      0.35      6.58   49.40
06082>      ID= 4  (   3)    :   0.00      0.00      6.58   49.40
06083>      ID= 5  (   3)    :   0.00      0.00      0.00    0.00
06084>      ID= 6  (   3)    :   0.00      0.00      0.00    0.00
06085> ------------------------------------------------------------------------------
06086>
06087> --------------------
06088> | ADD HYD  (******)|
06089> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
06090> --------------------         (ha)    (cms)    (hrs)     (mm)
06091>        ID1= 1 (******):     7.69   0.410     6.58    47.02
06092>      + ID2= 2 (******):     6.86   0.707     6.58    49.40
06093>        ====================================================
06094>        ID = 3 (******):    14.55   1.117     6.58    48.14
06095>
06096>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06097> ------------------------------------------------------------------------------
06098> --------------------
06099> | CALIB            |
06100> | STANDHYD (******)|   Area    (ha)=   8.58
06101> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
06102> --------------------
06103>                              IMPERVIOUS    PERVIOUS (i)
06104>      Surface Area     (ha)=       4.98         3.60
06105>      Dep. Storage     (mm)=       2.00         4.48
06106>      Average Slope     (%)=       0.91         1.12
06107>      Length            (m)=     246.54       157.18
06108>      Mannings n           =      0.015        0.300
06109>
06110>      Max.Eff.Inten.(mm/hr)=      95.56        36.17
06111>                 over (min)       5.00        40.00
06112>      Storage Coeff.  (min)=       5.01 (ii)   37.00 (ii)
06113>      Unit Hyd. Tpeak (min)=       5.00        40.00
06114>      Unit Hyd. peak  (cms)=       0.21         0.03
06115>                                                          *TOTALS*
06116>      PEAK FLOW       (cms)=       1.28         0.22          1.364 (iii)
06117>      TIME TO PEAK    (hrs)=       6.00         6.50           6.00
06118>      RUNOFF VOLUME    (mm)=      70.52        41.02          58.13
06119>      TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
06120>      RUNOFF COEFFICIENT   =       0.97         0.57           0.80
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06121>
06122>
06123>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06124>              CN*  =  85.0    Ia = Dep. Storage  (Above)
06125>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06126>            THAN THE STORAGE COEFFICIENT.
06127>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06128>
06129> --------------------------------------------------------------------------------
06130>
06131> --------------------
06132> | ADD HYD  ( 50650)|
06133> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
06134> --------------------          (ha)    (cms)    (hrs)     (mm)
06135>         ID1= 1 (******):     8.58   1.364     6.00    58.13
06136>       + ID2= 2 (******):   193.52   3.999     7.17    54.33
06137>         ====================================================
06138>         ID = 3 ( 50650):   202.10   4.185     7.08    54.49
06139>
06140>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06141> --------------------------------------------------------------------------------
06142>
06143> --------------------
06144> | ADD HYD  ( 50650)|
06145> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
06146> --------------------          (ha)    (cms)    (hrs)     (mm)
06147>         ID1= 3 ( 50650):   202.10   4.185     7.08    54.49
06148>       + ID2= 2 (******):    14.55   1.117     6.58    48.14
06149>         ====================================================
06150>         ID = 1 ( 50650):   216.65   5.245     7.00    54.07
06151>
06152>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06153> --------------------------------------------------------------------------------
06154> --------------------
06155> | ROUTE CHN( 60650)|
06156> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
06157> --------------------
06158>                <------ DATA FOR SECTION (   1.1) ------>
06159>                Distance      Elevation       Manning
06160>                    0.00         129.45        0.0450
06161>                    6.00         129.24        0.0450
06162>                    8.00         128.92        0.0450
06163>                   10.00         128.26        0.0450
06164>                   12.00         127.37        0.0450
06165>                   14.00         126.79        0.0450
06166>                   16.00         126.20        0.0450
06167>                   18.00         125.80        0.0450
06168>                   21.00         125.29        0.0450
06169>                   24.00         124.85        0.0450
06170>                   27.00         124.54        0.0350      Main Channel
06171>                   30.00         124.62        0.0350      Main Channel
06172>                   33.00         124.84    0.0350 /0.0450  Main Channel
06173>                   36.00         125.26        0.0450
06174>                   39.00         125.86        0.0450
06175>                   42.00         126.49        0.0450
06176>                   48.00         128.97        0.0450
06177>                   54.00         129.42        0.0450
06178>
06179>       <---------------------- TRAVEL TIME TABLE ---------------------->
06180>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
06181>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
06182>         0.26  124.80    .390E+03        0.9         0.76       7.18
06183>         0.51  125.06    .124E+04        4.9         1.29       4.21
06184>         0.77  125.31    .239E+04       12.3         1.67       3.25
06185>         1.03  125.57    .380E+04       23.2         1.99       2.73
06186>         1.28  125.83    .544E+04       37.9         2.27       2.40
06187>         1.54  126.08    .731E+04       56.6         2.52       2.15
06188>         1.80  126.34    .937E+04       79.6         2.77       1.96
06189>         2.05  126.60    .116E+05      107.2         3.01       1.81
06190>         2.31  126.85    .140E+05      139.3         3.25       1.67
06191>         2.57  127.11    .165E+05      175.4         3.47       1.57
06192>         2.82  127.37    .191E+05      215.7         3.68       1.48
06193>         3.08  127.62    .219E+05      261.1         3.89       1.39
06194>         3.34  127.88    .247E+05      310.7         4.10       1.32
06195>         3.59  128.14    .276E+05      364.3         4.30       1.26
06196>         3.85  128.40    .307E+05      421.6         4.48       1.21
06197>         4.11  128.65    .338E+05      482.7         4.65       1.17
06198>         4.36  128.91    .371E+05      548.1         4.82       1.13
06199>         4.62  129.17    .406E+05      600.9         4.83       1.13
06200>         4.88  129.42    .446E+05      634.1         4.63       1.17
06201>
06202>                                    <---- hydrograph ---->   <-pipe / channel->
06203>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
06204>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
06205>    INFLOW : ID= 2 ( 50650)  216.65     5.24    7.00  54.07      0.53       1.30
06206>    OUTFLOW: ID= 1 ( 60650)  216.65     5.21    7.00  54.07      0.52       1.30
06207>
06208>
06209>
06210> --------------------------------------------------------------------------------
06211> --------------------
06212> | CALIB            |
06213> | STANDHYD ( 40670)|   Area    (ha)=  50.76
06214> |ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
06215> --------------------
06216>                                IMPERVIOUS    PERVIOUS (i)
06217>      Surface Area     (ha)=      37.06         13.71
06218>      Dep. Storage     (mm)=       2.00          6.10
06219>      Average Slope     (%)=       1.50          1.50
06220>      Length            (m)=     581.73         82.00
06221>      Mannings n           =      0.015         0.280
06222>
06223>      Max.Eff.Inten.(mm/hr)=      95.56         45.40
06224>                 over (min)        5.00         25.00
06225>      Storage Coeff.  (min)=       7.22 (ii)    24.59 (ii)
06226>      Unit Hyd. Tpeak (min)=       5.00         25.00
06227>      Unit Hyd. peak  (cms)=       0.17          0.05
06228>                                                      *TOTALS*
06229>      PEAK FLOW       (cms)=       8.89          0.93          9.428 (iii)
06230>      TIME TO PEAK    (hrs)=       6.00          6.25          6.00
06231>      RUNOFF VOLUME    (mm)=      70.52         34.21         60.35
06232>      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
06233>      RUNOFF COEFFICIENT   =       0.97          0.47          0.83
06234>
06235>
06236>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06237>              CN*  =  79.5    Ia = Dep. Storage  (Above)
06238>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06239>            THAN THE STORAGE COEFFICIENT.
06240>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06241>
06242> --------------------------------------------------------------------------------
06243>
06244> --------------------
06245> | ADD HYD  ( 50670)|
06246> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
06247> --------------------          (ha)    (cms)    (hrs)     (mm)
06248>         ID1= 1 ( 40670):    50.76   9.428     6.00    60.35
06249>       + ID2= 2 ( 60650):   216.65   5.211     7.00    54.07
06250>         ====================================================
06251>         ID = 3 ( 50670):   267.41  12.073     6.00    55.26
06252>
06253>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06254> --------------------------------------------------------------------------------
06255> --------------------
06256> | ROUTE CHN( 60670)|
06257> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
06258> --------------------
06259>                <------ DATA FOR SECTION (   1.1) ------>
06260>                Distance      Elevation       Manning
06261>                    0.00         115.77        0.0450
06262>                   20.00         115.51        0.0450
06263>                   24.00         114.73        0.0450
06264>                   28.00         113.17    0.0450 /0.0350  Main Channel
06265>                   32.00         113.16    0.0350 /0.0450  Main Channel
06266>                   36.00         114.68        0.0450
06267>                   40.00         115.05        0.0450
06268>                   44.00         115.27        0.0450
06269>                   48.00         115.46        0.0450
06270>                   52.00         115.71        0.0450
06271>                   54.00         115.77        0.0450
06272>
06273>       <---------------------- TRAVEL TIME TABLE ---------------------->
06274>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
06275>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
06276>         0.14  113.30    .275E+03        0.3         0.60      13.60
06277>         0.27  113.43    .612E+03        1.2         0.93       8.76
06278>         0.41  113.57    .996E+03        2.4         1.18       6.88
06279>         0.55  113.71    .143E+04        4.1         1.39       5.85
06280>         0.69  113.84    .191E+04        6.1         1.57       5.18
06281>         0.82  113.98    .244E+04        8.6         1.73       4.70
06282>         0.96  114.12    .301E+04       11.6         1.87       4.34
06283>         1.10  114.26    .363E+04       14.9         2.00       4.06
06284>         1.24  114.39    .430E+04       18.8         2.12       3.82
06285>         1.37  114.53    .502E+04       23.1         2.24       3.63
06286>         1.51  114.67    .579E+04       27.9         2.34       3.46
06287>         1.65  114.81    .664E+04       32.5         2.38       3.41
06288>         1.78  114.94    .763E+04       37.8         2.41       3.36
06289>         1.92  115.08    .878E+04       44.0         2.44       3.33
06290>         2.06  115.22    .101E+05       50.8         2.45       3.31
06291>         2.20  115.35    .117E+05       58.8         2.46       3.30
06292>         2.33  115.49    .134E+05       68.1         2.47       3.29
06293>         2.47  115.63    .157E+05       74.2         2.30       3.53
06294>         2.61  115.77    .188E+05       85.0         2.20       3.69
06295>
06296>                                    <---- hydrograph ---->   <-pipe / channel->
06297>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
06298>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
06299>    INFLOW : ID= 2 ( 50670)  267.41    12.07    6.00  55.26      0.98       1.89
06300>    OUTFLOW: ID= 1 ( 60670)  267.41    10.90    6.00  55.26      0.93       1.83
06301>
06302>
06303>
06304> --------------------------------------------------------------------------------
06305> --------------------
06306> | CALIB            |
06307> | STANDHYD ( 40700)|   Area    (ha)=  10.86
06308> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
06309> --------------------
06310>                                IMPERVIOUS    PERVIOUS (i)
06311>      Surface Area     (ha)=       6.22          4.63
06312>      Dep. Storage     (mm)=       2.00          8.04
06313>      Average Slope     (%)=       2.30          2.30
06314>      Length            (m)=     269.03         47.00
06315>      Mannings n           =      0.015         0.350
06316>
06317>      Max.Eff.Inten.(mm/hr)=      95.56         57.27
06318>                 over (min)        5.00         20.00
06319>      Storage Coeff.  (min)=       4.00 (ii)    15.40 (ii)
06320>      Unit Hyd. Tpeak (min)=       5.00         20.00
06321>      Unit Hyd. peak  (cms)=       0.24          0.07
06322>                                                      *TOTALS*
06323>      PEAK FLOW       (cms)=       1.56          0.42          1.856 (iii)
06324>      TIME TO PEAK    (hrs)=       6.00          6.17          6.00
06325>      RUNOFF VOLUME    (mm)=      70.52         34.33         54.27
06326>      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
06327>      RUNOFF COEFFICIENT   =       0.97          0.47          0.75
06328>
06329> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
06330>
06331>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06332>              CN*  =  80.7    Ia = Dep. Storage  (Above)
06333>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06334>            THAN THE STORAGE COEFFICIENT.
06335>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06336>
06337> --------------------------------------------------------------------------------
06338>
06339> --------------------
06340> | ADD HYD  ( 50680)|
06341> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
06342> --------------------          (ha)    (cms)    (hrs)     (mm)
06343>         ID1= 1 ( 40700):    10.86   1.856     6.00    54.27
06344>       + ID2= 2 ( 60670):   267.41  10.905     6.00    55.26
06345>         ====================================================
06346>         ID = 3 ( 50680):   278.27  12.760     6.00    55.22
06347>
06348>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06349> --------------------------------------------------------------------------------
06350> --------------------
06351> | CALIB            |
06352> | STANDHYD ( 40680)|   Area    (ha)=   1.20
06353> |ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
06354> --------------------
06355>                                IMPERVIOUS    PERVIOUS (i)
06356>      Surface Area     (ha)=       0.50          0.69
06357>      Dep. Storage     (mm)=       2.00          7.98
06358>      Average Slope     (%)=       0.60          0.60
06359>      Length            (m)=      89.27         69.00
06360>      Mannings n           =      0.015         0.350
06361>
06362>      Max.Eff.Inten.(mm/hr)=      95.56         39.23
06363>                 over (min)        5.00         30.00
06364>      Storage Coeff.  (min)=       3.09 (ii)    28.08 (ii)
06365>      Unit Hyd. Tpeak (min)=       5.00         30.00
06366>      Unit Hyd. peak  (cms)=       0.27          0.04
06367>                                                      *TOTALS*
06368>      PEAK FLOW       (cms)=       0.12          0.04          0.144 (iii)
06369>      TIME TO PEAK    (hrs)=       6.00          6.33          6.00
06370>      RUNOFF VOLUME    (mm)=      70.52         33.70         48.01
06371>      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
06372>      RUNOFF COEFFICIENT   =       0.97          0.46          0.66
06373>
06374> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
06375>
06376>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06377>              CN*  =  80.0    Ia = Dep. Storage  (Above)
06378>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06379>            THAN THE STORAGE COEFFICIENT.
06380>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06381>
06382> --------------------------------------------------------------------------------
06383> --------------------
06384> | CALIB            |
06385> | STANDHYD ( 40690)|   Area    (ha)=  25.49
06386> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
06387> --------------------
06388>                                IMPERVIOUS    PERVIOUS (i)
06389>      Surface Area     (ha)=       7.93         17.56
06390>      Dep. Storage     (mm)=       2.00          8.01
06391>      Average Slope     (%)=       3.10          3.10
06392>      Length            (m)=     412.26         40.00
06393>      Mannings n           =      0.015         0.350
06394>
06395>      Max.Eff.Inten.(mm/hr)=      95.56         57.47
06396>                 over (min)        5.00         15.00
06397>      Storage Coeff.  (min)=       4.72 (ii)    14.17 (ii)
06398>      Unit Hyd. Tpeak (min)=       5.00         15.00
06399>      Unit Hyd. peak  (cms)=       0.22          0.08
06400>                                                      *TOTALS*
06401>      PEAK FLOW       (cms)=       1.81          1.61          3.181 (iii)
06402>      TIME TO PEAK    (hrs)=       6.00          6.08          6.00
06403>      RUNOFF VOLUME    (mm)=      70.52         32.20         42.73
06404>      TOTAL RAINFALL   (mm)=      72.52         72.52         72.52
06405>      RUNOFF COEFFICIENT   =       0.97          0.44          0.59
06406>
06407> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
06408>
06409>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06410>              CN*  =  78.5    Ia = Dep. Storage  (Above)
06411>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06412>            THAN THE STORAGE COEFFICIENT.
06413>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06414>
06415> --------------------------------------------------------------------------------
06416>
06417> --------------------
06418> | ADD HYD  ( 50690)|
06419> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
06420> --------------------          (ha)    (cms)    (hrs)     (mm)
06421>         ID1= 1 ( 40680):     1.20   0.144     6.00    48.01
06422>       + ID2= 2 ( 40690):    25.49   3.181     6.00    42.73
06423>         ====================================================
06424>         ID = 3 ( 50690):    26.69   3.325     6.00    42.97
06425>
06426>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   278.27  12.760     6.00    55.22
      + ID2= 2 ( 50690):    26.69   3.325     6.00    42.97
        ==================================================
        ID = 3 ( 50700):   304.96  16.085     6.00    54.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        109.54        0.0450
                    4.00        108.85        0.0450
                    8.00        108.76        0.0450
                   12.00        108.31        0.0450
                   16.00        107.44        0.0450
                   20.00        107.22        0.0450
                   24.00        107.06        0.0450
                   28.00        107.10        0.0450
                   32.00        107.04        0.0450
                   36.00        106.98        0.0450
                   40.00        106.83        0.0350      Main Channel
                   44.00        106.49        0.0350      Main Channel
                   48.00        106.92    0.0350 /0.0450  Main Channel
                   52.00        107.19        0.0450
                   56.00        107.11        0.0450
                   60.00        107.14        0.0450
                   64.00        107.27        0.0450
                   68.00        107.71        0.0450
                   72.00        108.37        0.0450
                   80.00        109.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.12   106.60    .128E+03       0.1        0.43      35.47
        0.23   106.72    .513E+03       0.4        0.69      22.34
        0.35   106.83    .115E+04       1.1        0.90      17.05
        0.52   107.00    .277E+04       3.6        1.21      12.69
        0.69   107.17    .675E+04       8.9        1.21      12.64
        0.86   107.34    .135E+05      19.9        1.35      11.35
        1.02   107.51    .211E+05      36.3        1.58       9.70
        1.19   107.68    .291E+05      57.8        1.82       8.39
        1.36   107.85    .375E+05      84.0        2.06       7.43
        1.53   108.02    .461E+05     114.5        2.28       6.71
        1.70   108.19    .550E+05     149.1        2.49       6.15
        1.87   108.35    .642E+05     187.4        2.68       5.71
        2.04   108.52    .737E+05     228.8        2.85       5.37
        2.21   108.69    .837E+05     274.1        3.01       5.09
        2.37   108.86    .942E+05     316.2        3.08       4.97
        2.54   109.03    .105E+06     372.6        3.25       4.72
        2.71   109.20    .117E+06     433.4        3.40       4.50
        2.88   109.37    .129E+06     498.6        3.55       4.31
        3.05   109.54    .141E+06     568.2        3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  304.96    16.09    6.00  54.15      0.80      1.30
   OUTFLOW: ID= 1 ( 60700)  304.96    11.78    6.17  54.15      0.73      1.24


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--------------------
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n           =      0.015        0.360

     Max.Eff.Inten.(mm/hr)=      95.56        58.30
                  over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.91 (ii)   11.96 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.35         0.48          0.759 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      70.52        32.42          40.33
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.45           0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.759     6.00    40.33
      + ID2= 2 ( 60700):   304.96  11.781     6.17    54.15
        ==================================================
        ID = 3 ( 50710):   311.31  12.295     6.17    53.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      95.56        61.31
                  over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.74 (ii)    8.15 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.22         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.41         0.51          5.918 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      70.52        35.27          64.76
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.49           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000  |    0.7080      1.0040
                           0.2890      0.3890  |    0.7750      1.0700
                           0.3270      0.4500  |    0.9210      1.2580
                           0.3600      0.6030  |    1.0000      1.3280
                           0.3900      0.6540  |    1.0820      1.3980
                           0.4190      0.7110  |    1.1670      1.4690
                           0.4450      0.7680  |    1.2550      1.5390
                           0.4700      0.8260  |    1.3460      1.6090
                           0.4960      0.8830  |    1.9470      1.9930
                           0.6450      0.9400  |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037      5.918      6.00      64.76
   OUTFLOW: ID= 1 ( 70150)     25.037      0.674      6.58      64.75
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.38
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.9703

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| Junction Command(70151) |
--------------------------
                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70150)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70151)    0.00      0.00    0.00      0.00

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--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=      95.56        58.46
                  over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.96 (ii)    8.39 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.24         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.78         0.41          3.192 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      70.52        33.47          61.26
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.46           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------
--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000  |    0.2230      0.3310
                           0.0580      0.0840  |    0.2500      0.3590
                           0.0780      0.1040  |    0.2790      0.3870
                           0.0930      0.1240  |    0.3090      0.4160
                           0.1060      0.1440  |    0.3750      0.4780
                           0.1180      0.1640  |    0.4110      0.5120
                           0.1280      0.1840  |    0.4470      0.5450
                           0.1590      0.2550  |    0.5250      0.6130
                           0.1770      0.2790  |    0.7390      0.9130
                           0.1990      0.3030  |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155      3.192      6.00      61.26
   OUTFLOW: ID= 1 ( 70160)     14.155      0.403      6.50      61.23
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.64
                  TIME SHIFT OF PEAK FLOW          (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5060

---------------------------------------------------------------------------
--------------------------
| Junction Command(70161) |
--------------------------
                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70160)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70161)    0.00      0.00    0.00      0.00

---------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   311.31  12.295     6.17    53.87
      + ID2= 2 ( 70150):    25.04   0.674     6.58    64.75
        ==================================================
        ID = 3 ( 50730):   336.35  12.873     6.17    54.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   336.35  12.873     6.17    54.68
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50730):   336.35  12.873     6.17    54.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 50730):   336.35  12.873     6.17    54.68
      + ID2= 2 ( 70160):    14.15   0.403     6.50    61.23
        ==================================================
        ID = 3 ( 50730):   350.50  13.253     6.17    54.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
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---------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
---------------------           (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
         ID1= 3 ( 50730):   350.50  13.253     6.17    54.94
       + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
         ====================================================
         ID = 1 ( 50730):   350.50  13.253     6.17    54.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         96.28        0.0450
                    9.00         95.39        0.0450
                   12.00         94.87        0.0450
                   15.00         94.17        0.0450
                   18.00         93.95        0.0450
                   21.00         94.01        0.0450
                   24.00         93.92        0.0450
                   27.00         93.98    0.0450 /0.0350  Main Channel
                   30.00         93.33        0.0350      Main Channel
                   32.00         93.73    0.0350 /0.0450  Main Channel
                   34.00         94.58        0.0450
                   35.00         95.06        0.0450
                   40.00         95.32        0.0450
                   45.00         96.12        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.13   93.46    .164E+03       0.0        0.36       89.51
        0.26   93.60    .654E+03       0.2        0.57       56.39
        0.40   93.73    .147E+04       0.6        0.75       43.03
        0.55   93.88    .274E+04       1.4        0.99       32.63
        0.70   94.03    .550E+04       2.8        1.00       32.28
        0.85   94.18    .104E+05       5.8        1.08       29.94
        1.00   94.33    .159E+05      10.1        1.24       26.04
        1.15   94.48    .216E+05      15.6        1.41       22.97
        1.29   94.63    .275E+05      22.2        1.57       20.64
        1.44   94.78    .338E+05      29.9        1.72       18.84
        1.59   94.93    .404E+05      38.6        1.86       17.44
        1.74   95.08    .473E+05      48.0        1.97       16.40
        1.89   95.23    .549E+05      58.1        2.05       15.76
        2.04   95.38    .637E+05      70.1        2.14       15.14
        2.19   95.53    .731E+05      83.0        2.21       14.67
        2.34   95.68    .833E+05      97.5        2.27       14.23
        2.49   95.83    .941E+05     113.5        2.34       13.82
        2.64   95.98    .106E+06     131.2        2.41       13.42
        2.79   96.13    .118E+06     150.7        2.48       13.05

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  350.50  13.25    6.17  54.94      1.08      1.33
   OUTFLOW: ID= 1 ( 60730)  350.50   9.72    6.58  54.94      0.98      1.22



--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
---------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      56.24        13.19
     Dep. Storage     (mm)=       2.00         5.50
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     680.34        43.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      95.56        61.17
                  over (min)      10.00        15.00
     Storage Coeff.  (min)=       7.64 (ii)   12.28 (ii)
     Unit Hyd. Tpeak (min)=      10.00        15.00
     Unit Hyd. peak  (cms)=       0.13         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=      12.58         1.39        13.789 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      70.52        34.96        63.41
     TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
     RUNOFF COEFFICIENT   =       0.97         0.48         0.87

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)     69.429    13.789      6.00      63.41
   OUTFLOW: ID= 1 ( 70170)     69.429     1.663      6.75      63.38
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.06
                  TIME SHIFT OF PEAK FLOW         (min)= 45.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  2.9114

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  --------------------------
  | Junction Command(70171) |
  --------------------------
                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------           (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 60730):   350.50   9.722     6.58    54.94
       + ID2= 2 ( 70170):    69.43   1.663     6.75    63.38
         ====================================================
         ID = 3 ( 50770):   419.93  11.370     6.58    56.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
---------------------           (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
         ID1= 3 ( 50770):   419.93  11.370     6.58    56.34
       + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
         ====================================================
         ID = 1 ( 50770):   419.93  11.370     6.58    56.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         92.38        0.0450
                    3.00         90.34        0.0450
                    6.00         89.94        0.0450
                    9.00         89.83        0.0450
                   12.00         89.80        0.0450
                   15.00         89.72        0.0450
                   18.00         89.58    0.0450 /0.0350  Main Channel
                   21.00         89.15        0.0350      Main Channel
                   24.00         89.82    0.0350 /0.0450  Main Channel
                   27.00         89.76        0.0450
                   30.00         89.78        0.0450
                   33.00         89.79        0.0450
                   36.00         89.80        0.0450
                   39.00         89.72        0.0450
                   42.00         90.35        0.0450
                   45.00         91.36        0.0450
                   48.00         92.10        0.0450
                   51.00         92.21        0.0450
                   54.00         92.34        0.0450
                   56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.15   89.29    .298E+02       0.0        0.31       13.27
        0.29   89.44    .119E+03       0.2        0.50        8.36
        0.44   89.58    .268E+03       0.7        0.65        6.38
        0.61   89.76    .588E+03       1.9        0.79        5.25
        0.78   89.93    .179E+04       5.1        0.71        5.86
        0.96   90.10    .329E+04      11.4        0.87        4.79
        1.13   90.27    .489E+04      20.2        1.03        4.03
        1.30   90.45    .656E+04      31.5        1.19        3.47
        1.47   90.62    .828E+04      45.0        1.35        3.06
        1.65   90.79    .100E+05      60.5        1.50        2.76
        1.82   90.97    .118E+05      77.9        1.64        2.53
        1.99   91.14    .136E+05      97.1        1.77        2.34
        2.17   91.31    .155E+05     118.1        1.90        2.18
        2.34   91.48    .173E+05     140.6        2.02        2.06
        2.51   91.66    .193E+05     164.7        2.13        1.95
        2.68   91.83    .212E+05     190.5        2.23        1.86
        2.86   92.00    .232E+05     218.0        2.33        1.78
        3.03   92.18    .253E+05     242.7        2.39        1.74
        3.20   92.35    .275E+05     262.6        2.37        1.75

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  419.93  11.37    6.58  56.34      0.95      0.86
   OUTFLOW: ID= 1 ( 60770)  419.93  11.34    6.67  56.34      0.95      0.86



--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
---------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78        11.79
     Dep. Storage     (mm)=       2.00         8.70
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     404.74        43.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      95.56        51.97
                  over (min)       5.00        20.00
     Storage Coeff.  (min)=       5.81 (ii)   18.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.20         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.10         0.90         3.706 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      70.52        31.54        51.03
     TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
     RUNOFF COEFFICIENT   =       0.97         0.43         0.70

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------           (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40780):    24.57   3.706     6.00    51.03
       + ID2= 2 ( 60770):   419.93  11.341     6.67    56.34
         ====================================================
         ID = 3 ( 50780):   444.50  12.079     6.50    56.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
---------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      95.56        59.91
                  over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.46 (ii)   16.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.33         0.26         1.514 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      70.52        35.36        57.44
     TOTAL RAINFALL   (mm)=      72.52        72.52        72.52
     RUNOFF COEFFICIENT   =       0.97         0.49         0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
---------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330
```

```
07039>
07040>      Max.Eff.Inten.(mm/hr)=      95.56        54.94
07041>                   over (min)        5.00        10.00
07042>      Storage Coeff.  (min)=       3.71 (ii)    8.01 (ii)
07043>      Unit Hyd. Tpeak (min)=       5.00        10.00
07044>      Unit Hyd. peak  (cms)=       0.25         0.13
07045>                                                          *TOTALS*
07046>      PEAK FLOW       (cms)=       1.22         0.06          1.276 (iii)
07047>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
07048>      RUNOFF VOLUME    (mm)=      70.52        31.79         66.72
07049>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
07050>      RUNOFF COEFFICIENT   =       0.97         0.44          0.92
07051>
07052> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
07053>
07054>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
07055>            CN*  =  78.5    Ia = Dep. Storage  (Above)
07056>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
07057>            THAN THE STORAGE COEFFICIENT.
07058>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07059>
07060> --------------------------------------------------------------------------------
07061>
07062> --------------------
07063> | ADD HYD  ( 50795)|
07064> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07065> --------------------         (ha)    (cms)    (hrs)     (mm)
07066>        ID1= 1 ( 40790):     8.18   1.514     6.00    57.44
07067>      + ID2= 2 ( 40800):     5.15   1.276     6.00    66.72
07068>        ==================================================
07069>        ID = 3 ( 50795):    13.33   2.790     6.00    61.03
07070>
07071>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07072> --------------------------------------------------------------------------------
07073> --------------------
07074> | RESERVOIR( 70180)|     OVERFLOW IS ON
07075> | IN= 2---> OUT= 1 |
07076> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
07077> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
07078>                            0.0000      0.0000  |    0.7780      0.6570
07079>                            0.0040      0.0150  |    1.1550      0.7720
07080>                            0.0090      0.0810  |    1.5780      0.8930
07081>                            0.0120      0.1550  |    1.9240      0.9870
07082>                            0.0140      0.2370  |    2.4190      1.1190
07083>                            0.0160      0.3260  |    2.9510      1.2560
07084>                            0.0620      0.3720  |    3.5980      1.3270
07085>                            0.2560      0.4700  |    4.5570      1.3990
07086>                            0.5310      0.5740  |    5.7230      1.4730
07087>
07088>                                 AREA     QPEAK     TPEAK       R.V.
07089>                                 (ha)     (cms)     (hrs)       (mm)
07090>    INFLOW : ID= 2 ( 50795)     13.332     2.790      6.00      61.03
07091>    OUTFLOW: ID= 1 ( 70180)     13.332     0.397      6.58      60.95
07092>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
07093>
07094>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
07095>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
07096>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
07097>
07098>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.22
07099>                    TIME SHIFT OF PEAK FLOW         (min)= 35.00
07100>                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.5239
07101>
07102> --------------------------------------------------------------------------------
07103>
07104>   --------------------------
07105>   | Junction Command(70181) |
07106>   --------------------------
07107>
07108>                            AREA     QPEAK   TPEAK     R.V.
07109>                            (ha)     (cms)   (hrs)     (mm)
07110>   INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
07111>   OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00
07112>
07113>   --------------------------------------------------------------------------------
07114> --------------------
07115> | CALIB            |
07116> | STANDHYD ( 40805)|   Area    (ha)=   3.57
07117> |ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
07118> --------------------
07119>                              IMPERVIOUS    PERVIOUS (i)
07120>      Surface Area     (ha)=       1.41         2.16
07121>      Dep. Storage     (mm)=       1.00         1.50
07122>      Average Slope     (%)=       1.00         2.00
07123>      Length            (m)=     154.27        40.00
07124>      Mannings n           =      0.013        0.250
07125>
07126>      Max.Eff.Inten.(mm/hr)=      95.56        76.99
07127>                   over (min)        5.00        15.00
07128>      Storage Coeff.  (min)=       3.37 (ii)   11.21 (ii)
07129>      Unit Hyd. Tpeak (min)=       5.00        15.00
07130>      Unit Hyd. peak  (cms)=       0.26         0.09
07131>                                                          *TOTALS*
07132>      PEAK FLOW       (cms)=       0.33         0.31          0.602 (iii)
07133>      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
07134>      RUNOFF VOLUME    (mm)=      71.52        44.91         54.14
07135>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
07136>      RUNOFF COEFFICIENT   =       0.99         0.62          0.75
07137>
07138> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
07139>
07140>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
07141>            CN*  =  85.0    Ia = Dep. Storage  (Above)
07142>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
07143>            THAN THE STORAGE COEFFICIENT.
07144>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07145>
07146> --------------------------------------------------------------------------------
07147>
07148> --------------------
07149> | ADD HYD  ( 50790)|
07150> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07151> --------------------         (ha)    (cms)    (hrs)     (mm)
07152>        ID1= 1 ( 40805):     3.57   0.602     6.00    54.14
07153>      + ID2= 2 ( 70180):    13.33   0.397     6.58    60.95
07154>        ==================================================
07155>        ID = 3 ( 50790):    16.90   0.743     6.00    59.51
07156>
07157>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07158> --------------------------------------------------------------------------------
07159>
07160> --------------------
07161> | ADD HYD  ( 50790)|
07162> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
07163> --------------------         (ha)    (cms)    (hrs)     (mm)
07164> *** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
07165> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
07166>        ID1= 3 ( 50790):    16.90   0.743     6.00    59.51
07167>      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
07168>        ==================================================
07169>        ID = 1 ( 50790):    16.90   0.743     6.00    59.51
07170>
07171>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07172> --------------------------------------------------------------------------------
07173>
07174> --------------------
07175> | ADD HYD  ( 50800)|
07176> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07177> --------------------         (ha)    (cms)    (hrs)     (mm)
07178>        ID1= 1 ( 50780):   444.50  12.079     6.50    56.04
07179>      + ID2= 2 ( 50790):    16.90   0.743     6.00    59.51
07180>        ==================================================
07181>        ID = 3 ( 50800):   461.41  12.622     6.50    56.17
07182>
07183>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07184> --------------------------------------------------------------------------------
07185> --------------------
07186> | ROUTE CHN( 60800)|
07187> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
07188> --------------------
07189>               <------ DATA FOR SECTION (   1.1) ------>
07190>               Distance      Elevation       Manning
07191>                   0.00         88.54        0.0450
07192>                   3.00         88.18        0.0450
07193>                   6.00         87.54        0.0450
07194>                   9.00         87.44        0.0450
07195>                  12.00         87.13        0.0450
07196>                  15.00         87.23        0.0450
07197>                  18.00         87.18        0.0450
07198>                  21.00         86.49    0.0450 /0.0350  Main Channel
07199>                  24.00         85.82        0.0350      Main Channel
07200>                  27.00         86.44    0.0350 /0.0450  Main Channel
07201>                  30.00         87.18        0.0450
07202>                  33.00         87.16        0.0450
07203>                  36.00         87.25        0.0450
07204>                  39.00         87.46        0.0450
07205>                  42.00         87.70        0.0450
07206>                  45.00         87.80        0.0450
07207>                  48.00         88.00        0.0450
07208>                  49.00         88.12        0.0450
07209>                  50.00         88.23        0.0450
07210>                  52.00         88.59        0.0450
07211>
07212>       <---------------------- TRAVEL TIME TABLE ---------------------->
07213>        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
07214>         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
07215>        0.12     85.95    .779E+02        0.0         0.37       48.75
07216>        0.25     86.07    .312E+03        0.2         0.59       30.71
07217>        0.37     86.19    .701E+03        0.5         0.77       23.44
07218>        0.49     86.32    .125E+04        1.1         0.94       19.35
07219>        0.62     86.44    .195E+04        1.9         1.09       16.67
07220>        0.77     86.59    .299E+04        3.8         1.36       13.29
07221>        0.92     86.74    .424E+04        6.2         1.59       11.42
07222>        1.07     86.89    .570E+04        9.3         1.77       10.25
07223>        1.22     87.04    .736E+04       13.0         1.92        9.44
07224>        1.37     87.19    .938E+04       16.8         1.94        9.33
07225>        1.52     87.34    .134E+05       22.9         1.86        9.74
07226>        1.66     87.49    .182E+05       31.1         1.86        9.72
07227>        1.81     87.64    .237E+05       41.6         1.91        9.51
07228>        1.96     87.79    .298E+05       53.9         1.96        9.22
07229>        2.11     87.94    .365E+05       68.9         2.05        8.84
07230>        2.26     88.09    .437E+05       86.5         2.15        8.43
07231>        2.41     88.24    .513E+05      106.2         2.25        8.04
07232>        2.56     88.39    .592E+05      128.2         2.36        7.69
07233>        2.71     88.54    .674E+05      152.5         2.46        7.36
07234>
07235>                                      <---- hydrograph ---->   <-pipe / channel->
07236>                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
07237>                                 (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
07238>    INFLOW : ID= 2 ( 50800)  461.41    12.62    6.50  56.17      1.20       1.90
07239>    OUTFLOW: ID= 1 ( 60800)  461.41    12.34    6.75  56.17      1.19       1.89
07240>
07241>
07242>
07243> --------------------------------------------------------------------------------
07244> --------------------
07245> | CALIB            |
07246> | STANDHYD ( 40820)|   Area    (ha)=  14.21
07247> |ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
07248> --------------------
07249>                              IMPERVIOUS    PERVIOUS (i)
07250>      Surface Area     (ha)=       2.98        11.23
07251>      Dep. Storage     (mm)=       2.00         9.57
07252>      Average Slope     (%)=       2.30         2.30
07253>      Length            (m)=     307.74        44.00
07254>      Mannings n           =      0.015        0.390
07255>
07256>      Max.Eff.Inten.(mm/hr)=      95.56        48.33
07257>                   over (min)        5.00        20.00
07258>      Storage Coeff.  (min)=       4.33 (ii)   16.85 (ii)
07259>      Unit Hyd. Tpeak (min)=       5.00        20.00
07260>      Unit Hyd. peak  (cms)=       0.23         0.06
07261>                                                          *TOTALS*
07262>      PEAK FLOW       (cms)=       0.48         0.82          1.028 (iii)
07263>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
07264>      RUNOFF VOLUME    (mm)=      70.52        28.00         33.52
07265>      TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
07266>      RUNOFF COEFFICIENT   =       0.97         0.39          0.46
07267>
07268> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
07269> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
07270>               YOU SHOULD CONSIDER SPLITTING THE AREA.
07271>
07272>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
07273>            CN*  =  73.8    Ia = Dep. Storage  (Above)
07274>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
07275>            THAN THE STORAGE COEFFICIENT.
07276>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
07277>
07278> --------------------------------------------------------------------------------
07279>
07280> --------------------
07281> | ADD HYD  ( 50820)|
07282> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07283> --------------------         (ha)    (cms)    (hrs)     (mm)
07284>        ID1= 1 ( 40820):    14.21   1.028     6.00    33.52
07285>      + ID2= 2 ( 60800):   461.41  12.340     6.75    56.17
07286>        ==================================================
07287>        ID = 3 ( 50820):   475.61  12.715     6.67    55.49
07288>
07289>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07290> --------------------------------------------------------------------------------
07291>
07292> --------------------
07293> | ADD HYD  ( 50830)|
07294> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
07295> --------------------         (ha)    (cms)    (hrs)     (mm)
07296>        ID1= 1 ( 50500):  1189.93  42.883     7.00    50.65
07297>      + ID2= 2 ( 50820):   475.61  12.715     6.67    55.49
07298>        ==================================================
07299>        ID = 3 ( 50830):  1665.55  55.193     6.92    52.03
07300>
07301>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
07302> --------------------------------------------------------------------------------
07303> --------------------
07304> | ROUTE CHN( 60830)|
07305> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
07306> --------------------
07307>               <------ DATA FOR SECTION (   1.1) ------>
07308>               Distance      Elevation       Manning
07309>                   0.00         82.12        0.0450
07310>                  20.00         81.53        0.0450
07311>                  24.00         81.26        0.0450
07312>                  28.00         81.27        0.0450
07313>                  32.00         80.34    0.0450 /0.0350  Main Channel
07314>                  36.00         79.95        0.0350      Main Channel
07315>                  40.00         80.78        0.0450
07316>                  44.00         81.45        0.0450
07317>                  48.00         81.53        0.0450
07318>                  52.00         81.49        0.0450
07319>                  56.00         81.51        0.0450
07320>                  60.00         81.58        0.0450
07321>                  64.00         81.58        0.0450
07322>                  68.00         81.61        0.0450
07323>                  72.00         81.75        0.0450
07324>                  80.00         82.07        0.0450
07325>
07326>       <---------------------- TRAVEL TIME TABLE ---------------------->
07327>        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
07328>         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
07329>        0.10     80.05    .555E+01        0.0         0.24        5.45
07330>        0.19     80.14    .222E+02        0.1         0.38        3.43
07331>        0.29     80.24    .499E+02        0.3         0.50        2.62
07332>        0.39     80.34    .888E+02        0.7         0.60        2.16
07333>        0.50     80.45    .146E+03        1.4         0.77        1.68
07334>        0.62     80.57    .213E+03        2.5         0.91        1.43
07335>        0.73     80.68    .290E+03        3.8         1.02        1.27
07336>        0.85     80.80    .375E+03        5.4         1.13        1.15
07337>        0.96     80.91    .471E+03        7.6         1.26        1.03
07338>        1.08     81.03    .578E+03       10.1         1.37        0.95
07339>        1.19     81.14    .695E+03       13.0         1.46        0.89
07340>        1.31     81.26    .823E+03       16.2         1.53        0.85
07341>        1.43     81.37    .100E+04       19.7         1.53        0.85
07342>        1.54     81.49    .121E+04       24.1         1.56        0.84
07343>        1.66     81.60    .155E+04       29.0         1.46        0.89
07344>        1.77     81.72    .204E+04       36.4         1.39        0.93
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        1.89    81.84    .259E+04      45.6          1.38       0.95
        2.00    81.95    .320E+04      56.7          1.38       0.94
        2.12    82.07    .387E+04      69.6          1.40       0.93

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1665.55    55.19    6.92  52.03      1.99      1.38
   OUTFLOW: ID= 1 ( 60830) 1665.55    55.25    6.92  52.03      1.98      1.38


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36        15.15
     Dep. Storage     (mm)=       2.00         5.54
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     550.83        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      95.56        91.06
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       7.29 (ii)   16.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.90         2.06          7.379 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      70.52        39.73         56.19
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.55          0.77


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         1.59
     Dep. Storage     (mm)=       2.00         9.61
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     116.69        69.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=      95.56        50.28
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       2.19 (ii)   16.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.31         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.12          0.161 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      70.52        29.04         35.03
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.40          0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  75.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51   7.379     6.00    56.19
      + ID2= 2 ( 40840):     2.04   0.161     6.00    35.03
        ================================================
        ID = 3 ( 50840):    47.56   7.540     6.00    55.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56   7.540     6.00    55.28
      + ID2= 2 ( 60830):  1665.55  55.253     6.92    52.03
        ================================================
        ID = 1 ( 50840):  1713.10  56.198     6.92    52.12

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          82.18         0.0450
                 32.00          79.04         0.0450
                 40.00          78.76         0.0450
                 48.00          78.58         0.0450
                 56.00          78.21         0.0450
                 64.00          76.89         0.0350      Main Channel
                 72.00          78.08         0.0450
                 80.00          79.44         0.0450
                 88.00          80.28         0.0450
                 96.00          80.92         0.0450
                104.00          81.29         0.0450
                112.00          81.62         0.0450
                120.00          81.76         0.0450
                128.00          81.81         0.0450
                140.00          82.02         0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)       (cms)        (m/s)      (min)
        0.27    77.16    .320E+03        0.2         0.48       24.00
        0.54    77.43    .128E+04        1.4         0.75       15.12
        0.81    77.70    .288E+04        4.2         0.99       11.54
        1.08    77.97    .512E+04        9.0         1.20        9.53
        1.35    78.24    .799E+04       16.6         1.42        8.02
        1.62    78.51    .119E+05       26.9         1.54        7.40
        1.89    78.78    .176E+05       41.0         1.59        7.15
        2.16    79.05    .252E+05       62.9         1.71        6.68
        2.43    79.32    .341E+05       93.9         1.89        6.05
        2.70    79.59    .438E+05      131.1         2.05        5.56
        2.97    79.86    .544E+05      175.1         2.20        5.18
        3.24    80.13    .660E+05      226.4         2.35        4.86
        3.51    80.40    .787E+05      284.9         2.48        4.60
        3.77    80.67    .924E+05      351.1         2.60        4.39
        4.04    80.94    .107E+06      425.7         2.72        4.20
        4.31    81.21    .124E+06      507.1         2.81        4.06
        4.58    81.48    .141E+06      598.4         2.90        3.94
        4.85    81.75    .161E+06      695.9         2.96        3.86
        5.12    82.02    .185E+06      800.9         2.97        3.85

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 1713.10    56.20    6.92  52.12      2.07      1.67
   OUTFLOW: ID= 1 ( 60840) 1713.10    55.98    7.00  52.12      2.07      1.67


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14        18.19
     Dep. Storage     (mm)=       2.00         7.29
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     418.93       142.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=      95.56        34.31
                   over (min)       5.00        35.00
     Storage Coeff.  (min)=       5.44 (ii)   31.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.20         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.65         1.03          2.078 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42          6.00
     RUNOFF VOLUME    (mm)=      70.52        32.53         41.88
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.45          0.58


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33   2.078     6.00    41.88
      + ID2= 2 ( 60840):  1713.10  55.982     7.00    52.12
        ================================================
        ID = 3 ( 50850):  1739.43  56.711     6.92    51.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77        35.37
     Dep. Storage     (mm)=       2.00         8.79
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     611.77       120.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      95.56        33.47
                   over (min)      10.00        40.00
     Storage Coeff.  (min)=       7.77 (ii)   36.18 (ii)
     Unit Hyd. Tpeak (min)=      10.00        40.00
     Unit Hyd. peak  (cms)=       0.13         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.30         1.78          4.936 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.50          6.00
     RUNOFF VOLUME    (mm)=      70.52        32.86         45.66
     TOTAL RAINFALL   (mm)=      72.52        72.52         72.52
     RUNOFF COEFFICIENT   =       0.97         0.45          0.63


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          85.55         0.0450
                 24.00          85.23         0.0450
                 28.00          85.17         0.0450
                 32.00          85.07         0.0450
                 36.00          84.96         0.0350      Main Channel
                 40.00          84.96         0.0350      Main Channel
                 44.00          85.00    0.0350 /0.0450  Main Channel
                 48.00          85.03         0.0450
                 52.00          85.18         0.0450
                 56.00          85.22         0.0450
                 60.00          85.31         0.0450
                 64.00          85.33         0.0450
                 68.00          85.38         0.0450
                 80.00          85.59         0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)       (cms)        (m/s)      (min)
        0.01    84.96    .992E+01        0.0          0.05      238.32
        0.04    84.99    .159E+03        0.0          0.21       57.53
        0.07    85.03    .408E+03        0.2          0.32       38.32
        0.10    85.06    .751E+03        0.4          0.40       30.54
        0.13    85.09    .114E+04        0.7          0.47       25.77
        0.16    85.12    .158E+04        1.2          0.53       22.66
        0.19    85.15    .206E+04        1.7          0.59       20.45
        0.22    85.18    .259E+04        2.3          0.64       18.91
        0.25    85.21    .321E+04        3.0          0.67       18.12
        0.29    85.24    .393E+04        3.8          0.70       17.32
        0.32    85.27    .473E+04        4.8          0.73       16.56
        0.35    85.30    .562E+04        5.9          0.76       15.89
        0.38    85.34    .663E+04        7.0          0.77       15.69
        0.41    85.37    .777E+04        8.5          0.80       15.20
        0.44    85.40    .902E+04       10.2          0.82       14.69
        0.47    85.43    .104E+05       12.2          0.85       14.19
        0.50    85.46    .118E+05       14.3          0.88       13.73
        0.53    85.49    .133E+05       16.7          0.91       13.31
        0.56    85.52    .150E+05       19.3          0.94       12.91

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40880)    56.14     4.94    6.00  45.66      0.32      0.73
   OUTFLOW: ID= 1 ( 60880)    56.14     3.41    6.17  45.64      0.27      0.68


--------------------------------------------------------------------------------
--------------------
| ROUTEPIPE( 80880)|     PIPE Number      =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
| DT=  5.0 min     |     Length        (m)= 888.03
--------------------     Slope       (m/m)=  0.004
                         Manning n        =  0.013

      <----------------- TRAVEL TIME TABLE ---------------------->
       DEPTH      VOLUME    FLOW RATE     VELOCITY    TRAV.TIME
         (m)     (cu.m.)       (cms)        (m/s)        min
        0.10    .213E+03        0.2          0.93       15.91
        0.20    .426E+03        0.7          1.41       10.53
        0.30    .639E+03        1.3          1.76        8.42
        0.40    .853E+03        2.0          2.04        7.25
        0.50    .107E+04        2.7          2.27        6.51
        0.60    .128E+04        3.6          2.47        5.99
        0.70    .149E+04        4.4          2.64        5.60
        0.80    .171E+04        5.4          2.79        5.30
        0.90    .192E+04        6.3          2.92        5.06
```

```
       1.00     .213E+04       7.3          3.04         4.87
       1.10     .234E+04       8.3          3.15         4.71
       1.20     .256E+04       9.3          3.24         4.57
       1.30     .277E+04      10.4          3.33         4.45
       1.40     .298E+04      11.4          3.40         4.35
       1.50     .320E+04      12.5          3.48         4.26
       1.60     .341E+04      13.6          3.54         4.18
       1.70     .362E+04      14.7          3.60         4.11
       1.80     .384E+04      15.8          3.66         4.05
       1.90     .405E+04      16.9          3.71         3.99

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60880)   56.14     3.41    6.17  45.64      0.58      2.43
   OUTFLOW: ID= 1 ( 80880)   56.14     3.28    6.25  45.64      0.57      2.40


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      18.24        23.47
     Dep. Storage     (mm)=       2.00         8.20
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     527.32        85.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      95.56        41.94
                   over (min)       5.00        35.00
     Storage Coeff.  (min)=       7.47 (ii)   30.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.17         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.31         1.46          3.917 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42           6.00
     RUNOFF VOLUME    (mm)=      70.52        32.07          44.70
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.44           0.62


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  75.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.41         5.15
     Dep. Storage     (mm)=       1.00         7.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     300.67        43.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=      95.56        86.49
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       5.49 (ii)   14.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.20         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.65         0.73          2.283 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      71.52        38.10          54.14
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.99         0.53           0.75


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------      (ha)      (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  13.56      2.28      6.00   54.14
     ================================================
     MAJOR SYS.(ID= 2):   2.03      1.32      6.00   54.14
     MINOR SYS.(ID= 3):  11.53      0.96      5.83   54.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71   3.917     6.00    44.70
      + ID2= 2 ( 50850):  1739.43  56.711     6.92    51.97
        ================================================
        ID = 3 ( 50890):  1781.14  57.869     6.92    51.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1781.14  57.869     6.92    51.80
      + ID2= 2 ( 80880):    56.14   3.283     6.25    45.64
        ================================================
        ID = 1 ( 50890):  1837.28  60.207     6.75    51.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  1837.28  60.207     6.75    51.61
      + ID2= 2 ( 90020):    11.53   0.960     5.83    54.14
        ================================================
        ID = 3 ( 50890):  1848.80  60.508     6.75    51.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         79.05        0.0450
                   2.00         78.40        0.0450
                   4.00         77.75        0.0450
                   6.00         77.16        0.0450
                   8.00         76.78        0.0450
                  10.00         76.65        0.0450
                  12.00         76.60        0.0450
                  14.00         76.58        0.0450
                  16.00         76.08        0.0450
                  18.00         75.49    0.0450 /0.0350  Main Channel
                  20.00         75.46        0.0350      Main Channel
                  22.00         75.52    0.0350 /0.0450  Main Channel
                  24.00         76.15        0.0450
                  26.00         76.44        0.0450
                  28.00         76.56        0.0450
                  30.00         76.68        0.0450
                  32.00         76.86        0.0450
                  34.00         77.01        0.0450
                  36.00         77.10        0.0450
                  40.00         79.16        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.03    75.49    .127E+02        0.0         0.14      32.03
        0.22    75.68    .231E+03        0.6         0.69       6.29
        0.40    75.87    .510E+03        2.0         1.01       4.28
        0.59    76.05    .849E+03        4.1         1.25       3.45
        0.78    76.24    .125E+04        6.9         1.43       3.02
        0.97    76.43    .175E+04       10.6         1.57       2.75
        1.15    76.62    .240E+04       14.6         1.57       2.75
        1.34    76.80    .343E+04       21.1         1.60       2.71
        1.53    76.99    .465E+04       30.1         1.68       2.58
        1.71    77.18    .605E+04       41.3         1.77       2.44
        1.90    77.36    .754E+04       55.7         1.92       2.26
        2.09    77.55    .908E+04       72.1         2.06       2.10
        2.27    77.74    .107E+05       90.6         2.20       1.96
        2.46    77.92    .123E+05      111.1         2.34       1.84
        2.65    78.11    .140E+05      133.5         2.48       1.74
        2.84    78.30    .157E+05      157.9         2.61       1.66
        3.02    78.49    .175E+05      184.1         2.73       1.58
        3.21    78.67    .193E+05      212.1         2.85       1.52
        3.40    78.86    .211E+05      242.1         2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1848.80    60.51    6.75  51.62      1.96      1.96
   OUTFLOW: ID= 1 ( 60900) 1848.80    60.51    6.75  51.62      1.95      1.95


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77         2.15
     Dep. Storage     (mm)=       2.00         7.07
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     214.73        44.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      95.56       102.36
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.82 (ii)   12.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.25         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.96         0.39          1.301 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      70.52        40.92          56.58
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.56           0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92    1.301     6.00    56.58
      + ID2= 2 ( 60900):  1848.80   60.514     6.75    51.62
        ================================================
        ID = 3 ( 50910):  1855.72   60.656     6.75    51.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       1.70         1.00
     Length            (m)=      78.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      95.56        67.47
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.92 (ii)    1.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.31         0.31
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.54         0.01          1.548 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      70.52        41.02          70.22
     TOTAL RAINFALL   (mm)=      72.52        72.52          72.52
     RUNOFF COEFFICIENT   =       0.97         0.57           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85    1.548     6.00    70.22
      + ID2= 2 (******):     0.00    0.000     6.58    49.40
        ================================================
        ID = 3 (******):     5.85    1.548     6.00    70.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.11    0.142     6.00    64.53
      + ID2= 2 (******):     1.15    0.348     6.58    49.40
        ================================================
        ID = 3 (******):     1.26    0.348     6.58    50.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     1.26    0.348     6.58    50.69
      + ID2= 2 (******):     5.85    1.548     6.00    70.22
        ================================================
        ID = 1 (******):     7.11    1.690     6.00    66.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
07957> --------------------------------------------------------------------------------
07958> --------------------
07959> | ROUTE CHN(******)|
07960> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
07961> --------------------
07962>                <------ DATA FOR SECTION (   1.1) ------>
07963>                Distance      Elevation       Manning
07964>                    0.00         426.51        0.0450
07965>                    0.98         426.14        0.0350      Main Channel
07966>                    2.04         426.14        0.0350      Main Channel
07967>                   20.51         426.51        0.0350      Main Channel
07968>
07969>       <---------------------- TRAVEL TIME TABLE ----------------------->
07970>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
07971>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
07972>         0.00  426.14    .579E+00       0.0         0.03     191.52
07973>         0.02  426.16    .114E+02       0.0         0.14      39.52
07974>         0.04  426.18    .285E+02       0.0         0.19      27.56
07975>         0.06  426.20    .520E+02       0.0         0.24      22.17
07976>         0.08  426.22    .818E+02       0.1         0.28      18.92
07977>         0.10  426.24    .118E+03       0.1         0.32      16.68
07978>         0.12  426.26    .161E+03       0.2         0.36      15.02
07979>         0.14  426.27    .210E+03       0.3         0.39      13.73
07980>         0.16  426.29    .265E+03       0.3         0.42      12.69
07981>         0.18  426.31    .326E+03       0.5         0.45      11.82
07982>         0.20  426.33    .394E+03       0.6         0.48      11.10
07983>         0.22  426.35    .469E+03       0.7         0.51      10.47
07984>         0.24  426.37    .549E+03       0.9         0.54       9.93
07985>         0.26  426.39    .637E+03       1.1         0.56       9.46
07986>         0.28  426.41    .730E+03       1.3         0.59       9.03
07987>         0.30  426.43    .830E+03       1.6         0.62       8.65
07988>         0.32  426.45    .936E+03       1.9         0.64       8.31
07989>         0.34  426.47    .105E+04       2.2         0.67       8.01
07990>         0.35  426.49    .117E+04       2.5         0.69       7.72
07991>
07992>                                    <---- hydrograph ---->   <-pipe / channel->
07993>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
07994>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
07995>    INFLOW : ID= 2 (******)    7.11     1.69    6.00  66.76      0.30      0.62
07996>    OUTFLOW: ID= 1 (******)    7.11     1.42    6.00  66.76      0.28      0.60
07997>
07998>
07999>
08000> --------------------------------------------------------------------------------
08001> --------------------
08002> | ROUTEPIPE(******)|     PIPE Number     =   1.00
08003> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)= 900.00
08004> | DT=  5.0 min     |     Length        (m)= 372.00
08005> --------------------     Slope       (m/m)=  0.004
08006>                           Manning n       =  0.013
08007>
08008>       <----------------- TRAVEL TIME TABLE ------------------->
08009>         DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
08010>           (m)      (cu.m.)      (cms)        (m/s)        min
08011>          0.05     .423E+02       0.1         0.58        10.67
08012>          0.09     .846E+02       0.2         0.90         6.89
08013>          0.14     .127E+03       0.4         1.15         5.39
08014>          0.19     .169E+03       0.6         1.36         4.55
08015>          0.24     .211E+03       0.9         1.55         4.01
08016>          0.28     .254E+03       1.2         1.71         3.63
08017>          0.33     .296E+03       1.5         1.85         3.34
08018>          0.38     .338E+03       1.8         1.99         3.12
08019>          0.43     .381E+03       2.2         2.11         2.94
08020>          0.47     .423E+03       2.5         2.22         2.80
08021>          0.52     .465E+03       2.9         2.32         2.67
08022>          0.57     .507E+03       3.3         2.41         2.57
08023>          0.62     .550E+03       3.7         2.50         2.48
08024>          0.66     .592E+03       4.1         2.58         2.40
08025>          0.71     .634E+03       4.5         2.66         2.33
08026>          0.76     .677E+03       5.0         2.73         2.27
08027>          0.81     .719E+03       5.4         2.80         2.21
08028>          0.85     .761E+03       5.9         2.86         2.17
08029>          0.90     .804E+03       6.3         2.92         2.12
08030>                                    <---- hydrograph ---->   <-pipe / channel->
08031>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
08032>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
08033>    INFLOW : ID= 2 (******)    4.00     0.85    6.00  64.53      0.23      1.52
08034>    OUTFLOW: ID= 1 (******)    4.00     0.86    6.00  64.53      0.23      1.53
08035>
08036>
08037>      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
08038>
08039> --------------------------------------------------------------------------------
08040> --------------------
08041> | CALIB            |
08042> | NASHYD   (******)|   Area     (ha)=   7.90   Curve Number    (CN)= 85.0
08043> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
08044> --------------------   U.H. Tp(hrs)=   0.39
08045>
08046>      Unit Hyd Qpeak  (cms)=   0.774
08047>
08048>      PEAK FLOW       (cms)=   0.623 (i)
08049>      TIME TO PEAK    (hrs)=   6.250
08050>      RUNOFF VOLUME    (mm)=  41.011
08051>      TOTAL RAINFALL   (mm)=  72.519
08052>      RUNOFF COEFFICIENT   =   0.566
08053>
08054>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08055>
08056> --------------------------------------------------------------------------------
08057> --------------------
08058> | CALIB            |
08059> | NASHYD   (******)|   Area     (ha)=   0.33   Curve Number    (CN)= 85.0
08060> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
08061> --------------------   U.H. Tp(hrs)=   0.18
08062>
08063>      Unit Hyd Qpeak  (cms)=   0.070
08064>
08065>      PEAK FLOW       (cms)=   0.042 (i)
08066>      TIME TO PEAK    (hrs)=   6.083
08067>      RUNOFF VOLUME    (mm)=  40.898
08068>      TOTAL RAINFALL   (mm)=  72.519
08069>      RUNOFF COEFFICIENT   =   0.564
08070>
08071>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08072>
08073> --------------------------------------------------------------------------------
08074>
08075> --------------------
08076> | ADD HYD  (******)|
08077> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
08078> --------------------         (ha)    (cms)    (hrs)     (mm)
08079>         ID1= 1 (******):     0.33   0.042     6.08    40.90
08080>       + ID2= 2 (******):     7.90   0.623     6.25    41.01
08081>         ==================================================
08082>         ID = 3 (******):     8.23   0.648     6.25    41.01
08083>
08084>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08085> --------------------------------------------------------------------------------
08086> --------------------
08087> | CALIB            |
08088> | NASHYD   (******)|   Area     (ha)=  17.88   Curve Number    (CN)= 85.0
08089> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
08090> --------------------   U.H. Tp(hrs)=   0.48
08091>
08092>      Unit Hyd Qpeak  (cms)=   1.423
08093>
08094>      PEAK FLOW       (cms)=   1.213 (i)
08095>      TIME TO PEAK    (hrs)=   6.333
08096>      RUNOFF VOLUME    (mm)=  41.014
08097>      TOTAL RAINFALL   (mm)=  72.519
08098>      RUNOFF COEFFICIENT   =   0.566
08099>
08100>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08101>
08102> --------------------------------------------------------------------------------
08103> --------------------
08104> | CALIB            |
08105> | NASHYD   (******)|   Area     (ha)=   0.44   Curve Number    (CN)= 85.0
08106> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
08107> --------------------   U.H. Tp(hrs)=   0.19
08108>
08109>      Unit Hyd Qpeak  (cms)=   0.088
08110>
08111>      PEAK FLOW       (cms)=   0.055 (i)
08112>      TIME TO PEAK    (hrs)=   6.083
08113>      RUNOFF VOLUME    (mm)=  40.921
08114>      TOTAL RAINFALL   (mm)=  72.519
08115>      RUNOFF COEFFICIENT   =   0.564
08116>
08117>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08118>
08119> --------------------------------------------------------------------------------
08120>
08121> --------------------
08122> | ADD HYD  (******)|
08123> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
08124> --------------------         (ha)    (cms)    (hrs)     (mm)
08125>         ID1= 1 (******):    17.88   1.213     6.33    41.01
08126>       + ID2= 2 (******):     0.44   0.055     6.08    40.92
08127>         ==================================================
08128>         ID = 3 (******):    18.32   1.240     6.33    41.01
08129>
08130>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08131> --------------------------------------------------------------------------------
08132> --------------------
08133> | CALIB            |
08134> | NASHYD   (******)|   Area     (ha)=   0.19   Curve Number    (CN)= 85.0
08135> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
08136> --------------------   U.H. Tp(hrs)=   0.15
08137>
08138>      Unit Hyd Qpeak  (cms)=   0.048
08139>
08140>      PEAK FLOW       (cms)=   0.027 (i)
08141>      TIME TO PEAK    (hrs)=   6.000
08142>      RUNOFF VOLUME    (mm)=  40.779
08143>      TOTAL RAINFALL   (mm)=  72.519
08144>      RUNOFF COEFFICIENT   =   0.562
08145>
08146>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
08147>
08148> --------------------------------------------------------------------------------
08149>
08150> --------------------
08151> | ADD HYD  (******)|
08152> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
08153> --------------------         (ha)    (cms)    (hrs)     (mm)
08154>         ID1= 1 (******):     0.19   0.027     6.00    40.78
08155>       + ID2= 2 (******):    18.32   1.240     6.33    41.01
08156>         ==================================================
08157>         ID = 3 (******):    18.51   1.248     6.33    41.01
08158>
08159>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08160> --------------------------------------------------------------------------------
08161>
08162> --------------------
08163> | ADD HYD  (******)|
08164> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
08165> --------------------         (ha)    (cms)    (hrs)     (mm)
08166>         ID1= 3 (******):    18.51   1.248     6.33    41.01
08167>       + ID2= 2 (******):     8.23   0.648     6.25    41.01
08168>         ==================================================
08169>         ID = 1 (******):    26.74   1.874     6.33    41.01
08170>
08171>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08172> --------------------------------------------------------------------------------
08173>
08174> --------------------
08175> | ADD HYD  (******)|
08176> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
08177> --------------------         (ha)    (cms)    (hrs)     (mm)
08178>         ID1= 1 (******):    26.74   1.874     6.33    41.01
08179>       + ID2= 2 (******):     4.00   0.862     6.00    64.53
08180>         ==================================================
08181>         ID = 3 (******):    30.74   2.201     6.08    44.07
08182>
08183>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08184> --------------------------------------------------------------------------------
08185>
08186> --------------------
08187> | ADD HYD  (******)|
08188> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
08189> --------------------         (ha)    (cms)    (hrs)     (mm)
08190>         ID1= 3 (******):    30.74   2.201     6.08    44.07
08191>       + ID2= 2 (******):     7.11   1.416     6.00    66.76
08192>         ==================================================
08193>         ID = 1 (******):    37.85   3.494     6.00    48.33
08194>
08195>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
08196> --------------------------------------------------------------------------------
08197> --------------------
08198> | ROUTE CHN(******)|
08199> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
08200> --------------------
08201>                <------ DATA FOR SECTION (   1.1) ------>
08202>                Distance      Elevation       Manning
08203>                    0.00         418.26        0.0450
08204>                   40.58         417.27        0.0450
08205>                   68.64         416.80        0.0450
08206>                  140.74         415.56        0.0450
08207>                  163.74         415.03    0.0450 /0.0350  Main Channel
08208>                  211.93         413.30        0.0350      Main Channel
08209>                  250.43         411.92        0.0350      Main Channel
08210>                  258.86         411.77        0.0350      Main Channel
08211>                  276.07         411.80        0.0350      Main Channel
08212>                  290.03         411.70        0.0350      Main Channel
08213>                  294.99         411.74        0.0350      Main Channel
08214>                  298.74         411.97        0.0350      Main Channel
08215>                  309.80         412.64        0.0350      Main Channel
08216>                  321.40         413.39        0.0350      Main Channel
08217>                  332.67         415.03    0.0350 /0.0450  Main Channel
08218>                  344.47         416.63        0.0450
08219>                  360.44         418.31        0.0450
08220>                  381.73         419.43        0.0450
08221>                  385.80         419.95        0.0450
08222>                  389.30         420.75        0.0450
08223>
08224>       <---------------------- TRAVEL TIME TABLE ----------------------->
08225>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
08226>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
08227>         0.33  412.03    .115E+05      14.5         1.18       13.21
08228>         0.67  412.36    .302E+05      61.5         1.91        8.18
08229>         1.00  412.70    .535E+05     139.9         2.46        6.38
08230>         1.33  413.03    .814E+05     252.5         2.91        5.37
08231>         1.66  413.36    .114E+06     402.0         3.32        4.72
08232>         2.00  413.70    .150E+06     597.3         3.74        4.19
08233>         2.33  414.03    .190E+06     834.3         4.12        3.80
08234>         2.66  414.36    .234E+06    1114.3         4.47        3.50
08235>         2.99  414.69    .281E+06    1439.4         4.80        3.26
08236>         3.33  415.03    .332E+06    1811.8         5.12        3.06
08237>         3.69  415.39    .393E+06    2361.5         5.65        2.77
08238>         4.05  415.75    .459E+06    2978.2         6.10        2.57
08239>         4.41  416.10    .533E+06    3668.2         6.46        2.42
08240>         4.76  416.46    .615E+06    4437.5         6.78        2.31
08241>         5.12  416.82    .705E+06    5290.7         7.05        2.22
08242>         5.48  417.18    .804E+06    6232.2         7.29        2.15
08243>         5.84  417.54    .910E+06    7276.0         7.51        2.08
08244>         6.20  417.90    .102E+07    8417.1         7.74        2.02
08245>         6.56  418.26    .114E+07    9654.5         7.95        1.97
08246>
08247>                                    <---- hydrograph ---->   <-pipe / channel->
08248>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
08249>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
08250>    INFLOW : ID= 2 (******)   37.85     3.49    6.00  48.33      0.08      1.18
08251>    OUTFLOW: ID= 1 (******)   37.85     2.62    6.25  48.33      0.06      1.18
08252>
08253>
08254>
08255> --------------------------------------------------------------------------------
08256> --------------------
08257> | CALIB            |
08258> | NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 85.0
08259> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
08260> --------------------   U.H. Tp(hrs)=   0.55
08261>
08262>      Unit Hyd Qpeak  (cms)=   2.154
```

```
      PEAK FLOW       (cms)=   1.909 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  41.016
      TOTAL RAINFALL   (mm)=  72.519
      RUNOFF COEFFICIENT   =   0.566

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    31.02   1.909     6.42    41.02
      + ID2= 2 (******):    37.85   2.622     6.25    48.33
        ================================================
        ID = 3 (******):    68.87   4.457     6.33    45.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

 FINISH
================================================================================

================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
  Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9

DATE: 02/19/2026                          TIME: 06:03:29

USER:


COMMENTS: _____

--------------------------------------------------------------------------------
 ***********************************************
 ** SIMULATION : 2 Year 12 hr 5 min SCS Type I **
 ***********************************************

--------------------
|    READ STORM    |    Filename: C:\Users\DPham\AppD
|                  |              ata\Local\Temp\
|                  |              10fc3edb-a74b-4f10-8c03-341fce89bc9e\5a0ab2af
| Ptotal= 48.07 mm |    Comments: 2 Year 12 hr 5 min SCS Type II CC
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    1.20 |  3.08    1.92 |  6.17    8.64 |  9.25    1.68
                0.08    1.20 |  3.17    1.92 |  6.25    8.64 |  9.33    1.68
                0.17    1.20 |  3.25    1.92 |  6.33    8.64 |  9.42    1.68
                0.25    1.20 |  3.33    1.92 |  6.42    8.64 |  9.50    1.68
                0.33    1.20 |  3.42    1.92 |  6.50    3.84 |  9.58    1.68
                0.42    1.20 |  3.50    1.92 |  6.58    3.84 |  9.67    1.68
                0.50    1.20 |  3.58    1.92 |  6.67    3.84 |  9.75    1.68
                0.58    1.20 |  3.67    1.92 |  6.75    3.84 |  9.83    1.68
                0.67    1.20 |  3.75    1.92 |  6.83    3.84 |  9.92    1.68
                0.75    1.20 |  3.83    1.92 |  6.92    3.84 | 10.00    0.96
                0.83    1.20 |  3.92    1.92 |  7.00    2.88 | 10.08    0.96
                0.92    1.20 |  4.00    2.88 |  7.08    2.88 | 10.17    0.96
                1.00    1.20 |  4.08    2.88 |  7.17    2.88 | 10.25    0.96
                1.08    1.20 |  4.17    2.88 |  7.25    2.88 | 10.33    0.96
                1.17    1.20 |  4.25    2.88 |  7.33    2.88 | 10.42    0.96
                1.25    1.20 |  4.33    2.88 |  7.42    2.88 | 10.50    0.96
                1.33    1.20 |  4.42    2.88 |  7.50    2.88 | 10.58    0.96
                1.42    1.20 |  4.50    3.84 |  7.58    2.88 | 10.67    0.96
                1.50    1.20 |  4.58    3.84 |  7.67    2.88 | 10.75    0.96
                1.58    1.20 |  4.67    3.84 |  7.75    2.88 | 10.83    0.96
                1.67    1.20 |  4.75    3.84 |  7.83    2.88 | 10.92    0.96
                1.75    1.20 |  4.83    3.84 |  7.92    2.88 | 11.00    0.96
                1.83    1.20 |  4.92    3.84 |  8.00    1.68 | 11.08    0.96
                1.92    1.20 |  5.00    5.76 |  8.08    1.68 | 11.17    0.96
                2.00    1.44 |  5.08    5.76 |  8.17    1.68 | 11.25    0.96
                2.08    1.44 |  5.17    5.76 |  8.25    1.68 | 11.33    0.96
                2.17    1.44 |  5.25    5.76 |  8.33    1.68 | 11.42    0.96
                2.25    1.44 |  5.33    5.76 |  8.42    1.68 | 11.50    0.96
                2.33    1.44 |  5.42    5.76 |  8.50    1.68 | 11.58    0.96
                2.42    1.44 |  5.50   23.03 |  8.58    1.68 | 11.67    0.96
                2.50    1.44 |  5.58   23.03 |  8.67    1.68 | 11.75    0.96
                2.58    1.44 |  5.67   23.03 |  8.75    1.68 | 11.83    0.96
                2.67    1.44 |  5.75   63.34 |  8.83    1.68 | 11.92    0.96
                2.75    1.44 |  5.83   63.34 |  8.92    1.68 | 12.00    0.96
                2.83    1.44 |  5.92   63.34 |  9.00    1.68 |
                2.92    1.44 |  6.00    8.64 |  9.08    1.68 |
                3.00    1.92 |  6.08    8.64 |  9.17    1.68 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number   (CN)= 79.5
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.47

      Unit Hyd Qpeak  (cms)=   3.502

      PEAK FLOW       (cms)=   1.022 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  14.957
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.311

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number   (CN)= 79.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.46

      Unit Hyd Qpeak  (cms)=   4.557

      PEAK FLOW       (cms)=   1.316 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  14.926
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.310

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50010)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40010):    43.09   1.022     6.42    14.96
      + ID2= 2 ( 40030):    54.88   1.316     6.42    14.93
        ================================================
        ID = 3 ( 50010):    97.97   2.338     6.42    14.94

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60010)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         160.98        0.0450
                   10.00         160.83        0.0450
                   20.00         160.72        0.0450
                   30.00         160.67        0.0450
                   40.00         160.61        0.0450
                   50.00         160.60        0.0450
                   60.00         160.55        0.0450
                   70.00         160.65        0.0450
                   80.00         159.78        0.0450
                   90.00         157.33    0.0450 /0.0350  Main Channel
                  100.00         157.18        0.0350      Main Channel
                  110.00         158.55        0.0450
                  120.00         160.34        0.0450
                  130.00         160.29        0.0450
                  140.00         160.30        0.0450
                  150.00         160.38        0.0450
                  160.00         160.53        0.0450
                  170.00         160.58        0.0450
                  180.00         160.51        0.0450
                  190.00         160.53        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15  157.33    .123E+04        0.4         0.43      57.39
        0.32  157.50    .422E+04        2.5         0.88      27.82
        0.49  157.67    .768E+04        6.3         1.20      20.47
        0.66  157.83    .116E+05       11.5         1.45      16.89
        0.83  158.00    .160E+05       18.2         1.67      14.70
        0.99  158.17    .209E+05       26.5         1.86      13.18
        1.16  158.34    .263E+05       36.3         2.03      12.06
        1.33  158.51    .321E+05       47.9         2.19      11.18
        1.50  158.68    .384E+05       62.7         2.40      10.21
        1.67  158.84    .451E+05       79.9         2.60       9.41
        1.84  159.01    .522E+05       99.0         2.79       8.79
        2.00  159.18    .597E+05      120.2         2.96       8.28
        2.17  159.35    .676E+05      143.3         3.11       7.86
        2.34  159.52    .759E+05      168.5         3.26       7.51
        2.51  159.69    .846E+05      195.8         3.40       7.20
        2.68  159.86    .938E+05      224.4         3.52       6.97
        2.85  160.02    .104E+06      254.6         3.61       6.78
        3.02  160.19    .114E+06      287.5         3.70       6.62
        3.18  160.36    .127E+06      315.8         3.64       6.72

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50010)   97.97     2.34    6.42  14.94      0.30      0.81
    OUTFLOW: ID= 1 ( 60010)   97.97     1.52    6.75  14.94      0.24      0.59


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40020)|   Area     (ha)=  51.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=          33.87         17.45
      Dep. Storage     (mm)=           2.00          6.20
      Average Slope     (%)=           1.30          1.30
      Length            (m)=         584.91         50.00
      Mannings n          =          0.015         0.290

      Max.Eff.Inten.(mm/hr)=          63.34         40.39
                    over (min)        10.00         25.00
      Storage Coeff.  (min)=           8.91 (ii)    23.34 (ii)
      Unit Hyd. Tpeak (min)=          10.00         25.00
      Unit Hyd. peak  (cms)=           0.12          0.05
                                                              *TOTALS*
      PEAK FLOW       (cms)=           4.13          0.88        4.622 (iii)
      TIME TO PEAK    (hrs)=           6.00          6.25         6.00
      RUNOFF VOLUME    (mm)=          46.07         19.95        34.58
      TOTAL RAINFALL   (mm)=          48.07         48.07        48.07
      RUNOFF COEFFICIENT   =           0.96          0.42         0.72

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50020)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40020):    51.32   4.622     6.00    34.58
      + ID2= 2 ( 60010):    97.97   1.516     6.75    14.94
        ================================================
        ID = 3 ( 50020):   149.29   4.781     6.00    21.69

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         153.66        0.0450
                    1.00         153.24        0.0450
                    2.00         152.95        0.0450
                    3.00         152.70        0.0450
                    4.00         152.40        0.0450
                    5.00         152.09        0.0450
                    6.00         151.83        0.0450
                    7.00         151.60        0.0450
                    8.00         151.49    0.0450 /0.0350  Main Channel
                    9.00         151.42        0.0350      Main Channel
                   10.00         151.38        0.0350      Main Channel
                   11.00         151.40        0.0350      Main Channel
                   12.00         151.38        0.0350      Main Channel
                   13.00         151.38        0.0350      Main Channel
                   14.00         151.38        0.0350      Main Channel
                   15.00         151.50    0.0350 /0.0450  Main Channel
                   16.00         151.56        0.0450
                   17.00         151.60        0.0450
                   25.00         153.59        0.0450
                   26.00         153.63        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  151.49    .140E+03        0.2         0.36      10.54
        0.23  151.60    .355E+03        0.9         0.58       6.57
        0.34  151.72    .624E+03        2.0         0.74       5.11
        0.45  151.83    .916E+03        3.6         0.89       4.27
        0.57  151.94    .123E+04        5.5         1.02       3.73
        0.68  152.05    .157E+04        7.8         1.13       3.35
        0.79  152.17    .193E+04       10.5         1.24       3.06
        0.90  152.28    .231E+04       13.6         1.34       2.83
        1.02  152.39    .271E+04       17.1         1.43       2.65
        1.13  152.50    .314E+04       20.9         1.52       2.50
        1.24  152.62    .358E+04       25.2         1.60       2.37
        1.35  152.73    .405E+04       29.8         1.67       2.26
        1.47  152.84    .454E+04       34.9         1.75       2.17
```

```
        1.58   152.95    .505E+04      40.3          1.81       2.09
        1.69   153.07    .558E+04      46.2          1.88       2.01
        1.80   153.18    .614E+04      52.6          1.95       1.95
        1.92   153.29    .672E+04      59.4          2.01       1.88
        2.03   153.40    .731E+04      66.7          2.07       1.83
        2.14   153.52    .793E+04      74.5          2.14       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50020)  149.29     4.78    6.00  21.69      0.52      0.96
   OUTFLOW: ID= 1 ( 60020)  149.29     4.72    6.08  21.69      0.52      0.96


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31         18.38
     Dep. Storage     (mm)=       2.00          6.00
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     686.45         52.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      63.34         53.97
                   over (min)       10.00         25.00
     Storage Coeff.  (min)=      10.05 (ii)    23.24 (ii)
     Unit Hyd. Tpeak (min)=      10.00         25.00
     Unit Hyd. peak  (cms)=       0.11          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.85          1.25          6.579 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25           6.00
     RUNOFF VOLUME    (mm)=      46.07         22.42          36.61
     TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
     RUNOFF COEFFICIENT   =       0.96          0.47           0.76


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40040):    70.68   6.579     6.00    36.61
      + ID2= 2 ( 60020):   149.29   4.719     6.08    21.69
        ================================================
        ID = 3 ( 50220):   219.97  11.098     6.08    26.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.0560
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50220)  219.973    11.098     6.08      26.48
   OUTFLOW: ID= 1 ( 70010)  219.973     1.617     8.08      26.47
   OVERFLOW:ID= 3 (  0003)    0.000     0.000     0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.57
                  TIME SHIFT OF PEAK FLOW         (min)=120.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  3.5652

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(70011) |
  --------------------------

                          AREA     QPEAK   TPEAK     R.V.
                          (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   219.97   1.617     8.08    26.47
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 70012):   219.97   1.617     8.08    26.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        148.49        0.0450
                   3.00        148.12        0.0450
                   6.00        148.07        0.0450
                   9.00        147.63        0.0450
                  12.00        147.56        0.0450
                  15.00        147.55        0.0450
                  18.00        147.46        0.0450
                  21.00        147.41        0.0450
                  24.00        147.36        0.0450
                  27.00        147.38        0.0450
                  30.00        147.22        0.0450
                  33.00        147.00        0.0450
                  36.00        146.34        0.0450
                  39.00        145.57        0.0350      Main Channel
                  42.00        145.39        0.0350      Main Channel
                  45.00        145.66        0.0350      Main Channel
                  48.00        146.68        0.0450
                  51.00        147.50        0.0450
                  55.00        148.22        0.0450
                  60.00        148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  145.48    .145E+03       0.0         0.25       83.65
        0.18  145.57    .581E+03       0.2         0.40       52.70
        0.35  145.74    .189E+04       1.1         0.73       29.09
        0.52  145.91    .348E+04       2.7         0.99       21.52
        0.68  146.07    .532E+04       5.0         1.19       17.84
        0.85  146.24    .740E+04       7.9         1.36       15.60
        1.02  146.41    .973E+04      11.5         1.51       14.07
        1.19  146.58    .123E+05      15.9         1.64       12.94
        1.35  146.74    .152E+05      21.2         1.78       11.93
        1.52  146.91    .183E+05      27.8         1.94       10.99
        1.69  147.08    .218E+05      35.0         2.05       10.39
        1.86  147.25    .259E+05      43.0         2.12       10.03
        2.02  147.41    .309E+05      50.6         2.09       10.18
        2.19  147.58    .383E+05      61.5         2.05       10.37
        2.36  147.75    .474E+05      77.1         2.07       10.25
        2.52  147.91    .571E+05      95.6         2.14        9.95
        2.69  148.08    .672E+05     116.0         2.20        9.65
        2.86  148.25    .783E+05     138.1         2.25        9.45
        3.03  148.42    .904E+05     163.4         2.31        9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 70012)  219.97     1.62    8.08  26.47      0.40      0.80
   OUTFLOW: ID= 1 ( 60040)  219.97     1.58    8.50  26.46      0.40      0.79


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94         19.34
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       3.30          3.30
     Length            (m)=     590.36         68.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=      63.34         47.78
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       6.78 (ii)    18.53 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.18          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.18          1.35          5.102 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      46.07         22.03          33.81
     TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
     RUNOFF COEFFICIENT   =       0.96          0.46           0.70


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40050):    52.28   5.102     6.00    33.81
      + ID2= 2 ( 60040):   219.97   1.577     8.50    26.46
        ================================================
        ID = 3 ( 50040):   272.25   5.188     6.00    27.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        146.35        0.0450
                  16.00        145.17        0.0450
                  18.00        144.62        0.0450
                  20.00        143.50        0.0450
                  26.00        141.63        0.0350      Main Channel
                  30.00        142.17        0.0350      Main Channel
                  34.00        144.28        0.0450
                  38.00        145.27        0.0450
                  50.00        146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25  141.88    .129E+03       0.2         0.54       12.17
        0.50  142.13    .516E+03       1.1         0.86        7.67
        0.74  142.38    .111E+04       3.4         1.21        5.42
        0.99  142.63    .184E+04       7.0         1.50        4.37
        1.24  142.87    .269E+04      11.9         1.75        3.76
        1.49  143.12    .366E+04      18.2         1.96        3.36
        1.74  143.37    .476E+04      25.9         2.15        3.06
        1.98  143.62    .597E+04      35.3         2.33        2.82
        2.23  143.87    .729E+04      46.5         2.52        2.61
        2.48  144.11    .869E+04      59.3         2.69        2.44
        2.73  144.36    .102E+05      74.3         2.88        2.28
        2.97  144.61    .118E+05      92.4         3.09        2.13
        3.22  144.86    .136E+05     111.6         3.24        2.03
        3.47  145.11    .156E+05     133.1         3.37        1.95
        3.72  145.35    .178E+05     152.6         3.38        1.94
        3.97  145.60    .206E+05     175.6         3.37        1.95
        4.21  145.85    .239E+05     204.3         3.37        1.95
        4.46  146.10    .279E+05     238.6         3.38        1.95
        4.71  146.35    .324E+05     279.0         3.40        1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  272.25     5.19    6.00  27.88      0.86      1.34
   OUTFLOW: ID= 1 ( 60050)  272.25     4.64    6.00  27.88      0.83      1.30


--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        142.52        0.0450
                   2.00        142.41        0.0450
                   4.00        142.26        0.0450
                   6.00        142.08        0.0450
                   8.00        141.85        0.0450
                  10.00        141.61        0.0450
                  12.00        141.38        0.0450
                  14.00        141.11        0.0450
                  16.00        140.93        0.0450
                  18.00        140.83        0.0450
                  20.00        140.73        0.0350      Main Channel
                  22.00        140.55        0.0350      Main Channel
                  24.00        140.49        0.0350      Main Channel
                  26.00        140.65        0.0350      Main Channel
                  28.00        141.04        0.0450
                  30.00        141.72        0.0450
                  32.00        142.19        0.0450
                  40.00        142.50        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08  140.57    .466E+02       0.0         0.23       24.59
        0.15  140.65    .155E+03       0.2         0.38       14.98
        0.23  140.73    .305E+03       0.5         0.51       11.12
        0.34  140.84    .598E+03       1.2         0.68        8.29
        0.45  140.95    .995E+03       2.3         0.80        7.09
        0.56  141.06    .147E+04       3.9         0.91        6.22
        0.68  141.17    .201E+04       6.1         1.04        5.45
        0.79  141.28    .259E+04       8.8         1.16        4.89
        0.90  141.39    .321E+04      12.0         1.27        4.47
        1.01  141.50    .389E+04      15.6         1.36        4.16
        1.12  141.61    .461E+04      19.7         1.45        3.90
```

```
        1.23   141.72    .537E+04      24.3          1.54       3.69
        1.34   141.84    .619E+04      29.4          1.61       3.52
        1.45   141.95    .707E+04      35.0          1.68       3.37
        1.56   142.06    .799E+04      41.1          1.75       3.24
        1.67   142.17    .898E+04      47.8          1.81       3.13
        1.79   142.28    .101E+05      54.6          1.85       3.07
        1.90   142.39    .113E+05      62.1          1.87       3.03
        2.01   142.50    .127E+05      70.3          1.88       3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  272.25     4.64    6.00  27.88      0.60      0.95
   OUTFLOW: ID= 1 ( 60060)  272.25     4.24    6.08  27.87      0.58      0.93


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94         1.90
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       2.60         2.60
     Length            (m)=     137.56        98.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=      63.34        23.27
                   over (min)        5.00        30.00
     Storage Coeff.  (min)=       3.04 (ii)   26.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.27         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.07          0.164 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33          6.00
     RUNOFF VOLUME    (mm)=      46.07        19.29         26.32
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.40          0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40060):     2.84   0.164     6.00    26.32
      + ID2= 2 ( 60060):   272.25   4.239     6.08    27.87
        ================================================
        ID = 3 ( 50070):   275.09   4.324     6.08    27.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30        13.55
     Dep. Storage     (mm)=       2.00         5.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     515.42        72.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        37.95
                   over (min)       10.00        30.00
     Storage Coeff.  (min)=       8.08 (ii)   25.33 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.13         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.18         0.74          3.545 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33          6.00
     RUNOFF VOLUME    (mm)=      46.07        21.94         34.97
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.46          0.73


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40080):    39.85   3.545     6.00    34.97
      + ID2= 2 ( 50070):   275.09   4.324     6.08    27.86
        ================================================
        ID = 3 ( 50080):   314.94   7.654     6.08    28.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         141.24        0.0450
                 40.00         140.58        0.0450
                 50.00         140.57        0.0450
                 60.00         140.36        0.0450
                 70.00         140.19        0.0450
                 80.00         140.15        0.0450
                 90.00         139.70        0.0450
                100.00         139.54        0.0350      Main Channel
                110.00         139.97        0.0450
                120.00         140.53        0.0450
                130.00         140.63        0.0450
                140.00         140.72        0.0450
                150.00         140.87        0.0450
                190.00         141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   139.63    .150E+03       0.1          0.18      43.53
        0.17   139.71    .598E+03       0.4          0.30      27.01
        0.26   139.80    .126E+04       1.1          0.42      19.24
        0.34   139.88    .209E+04       2.2          0.52      15.58
        0.43   139.97    .307E+04       3.8          0.60      13.36
        0.51   140.05    .420E+04       6.1          0.70      11.45
        0.60   140.14    .548E+04       9.0          0.79      10.19
        0.68   140.22    .714E+04      11.3          0.76      10.55
        0.77   140.31    .919E+04      15.7          0.82       9.77
        0.85   140.39    .115E+05      21.0          0.88       9.11
        0.94   140.48    .141E+05      27.4          0.94       8.54
        1.02   140.56    .169E+05      34.6          0.99       8.12
        1.11   140.65    .205E+05      41.1          0.97       8.32
        1.19   140.74    .248E+05      51.5          1.00       8.02
        1.28   140.82    .296E+05      64.0          1.04       7.70
        1.36   140.91    .348E+05      78.0          1.08       7.44
        1.45   140.99    .407E+05      93.6          1.11       7.24
        1.53   141.08    .472E+05     111.7          1.14       7.05
        1.62   141.16    .545E+05     132.2          1.17       6.87

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94     7.65    6.08  28.76      0.56      0.75
   OUTFLOW: ID= 1 ( 60080)  314.94     6.33    6.17  28.76      0.52      0.71


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.99         3.46
     Dep. Storage     (mm)=       2.00         9.68
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     172.19        99.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=      63.34        13.33
                   over (min)        5.00        40.00
     Storage Coeff.  (min)=       3.56 (ii)   36.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.26         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.08          0.129 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.58          6.00
     RUNOFF VOLUME    (mm)=      46.07        14.42         18.78
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.30          0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40090):     4.45   0.129     6.00    18.78
      + ID2= 2 ( 60080):   314.94   6.327     6.17    28.76
        ================================================
        ID = 3 ( 50090):   319.39   6.389     6.17    28.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         138.71        0.0450
                  4.00         136.97        0.0450
                 28.00         135.94        0.0450
                 32.00         135.79        0.0350      Main Channel
                 36.00         135.23        0.0350      Main Channel
                 40.00         135.71    0.0350 /0.0450  Main Channel
                 54.00         136.96        0.0450
                 80.00         138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   135.39    .631E+02       0.1          0.44      12.42
        0.31   135.55    .253E+03       0.5          0.69       7.83
        0.47   135.71    .568E+03       1.6          0.91       5.97
        0.65   135.89    .114E+04       4.2          1.20       4.52
        0.84   136.07    .209E+04       8.7          1.35       4.02
        1.02   136.25    .342E+04      15.4          1.47       3.70
        1.20   136.44    .511E+04      24.8          1.58       3.44
        1.38   136.62    .718E+04      37.2          1.69       3.21
        1.57   136.80    .962E+04      53.1          1.79       3.02
        1.75   136.98    .124E+05      72.7          1.90       2.85
        1.93   137.17    .155E+05      97.8          2.05       2.64
        2.11   137.35    .188E+05     127.1          2.20       2.47
        2.30   137.53    .223E+05     160.4          2.34       2.31
        2.48   137.71    .259E+05     197.8          2.48       2.19
        2.66   137.90    .298E+05     239.5          2.61       2.07
        2.85   138.08    .339E+05     285.4          2.74       1.98
        3.03   138.26    .381E+05     335.6          2.86       1.89
        3.21   138.44    .426E+05     390.3          2.98       1.82
        3.39   138.63    .472E+05     449.4          3.10       1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  319.39     6.39    6.17  28.62      0.74      1.27
   OUTFLOW: ID= 1 ( 60100)  319.39     6.17    6.25  28.62      0.73      1.26


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.46        14.44
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     423.45       125.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      63.34        18.15
                   over (min)        5.00        45.00
     Storage Coeff.  (min)=       7.18 (ii)   40.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        45.00
     Unit Hyd. peak  (cms)=       0.17         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.84         0.41          1.966 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.58          6.00
     RUNOFF VOLUME    (mm)=      46.07        19.72         30.90
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.41          0.64


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40100):    26.90   1.966     6.00    30.90
      + ID2= 2 ( 60100):   319.39   6.172     6.25    28.62
        ================================================
        ID = 3 ( 50110):   346.28   6.902     6.25    28.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

     Unit Hyd Qpeak  (cms)=   3.961
```

```
      PEAK FLOW       (cms)=   1.227 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  16.088
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.335

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area     (ha)=  63.82   Curve Number    (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

      Unit Hyd Qpeak  (cms)=   4.875

      PEAK FLOW       (cms)=   1.736 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  17.531
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.365

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   1.227     6.33    16.09
      + ID2= 2 ( 40130):    63.82   1.736     6.42    17.53
        ================================================
        ID = 3 ( 50130):   108.42   2.941     6.42    16.94

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        155.27        0.0450
                    2.00        155.23        0.0450
                    4.00        155.21        0.0450
                    6.00        155.08        0.0450
                    8.00        154.94        0.0450
                   10.00        154.68        0.0450
                   12.00        154.21        0.0450
                   14.00        153.90        0.0450
                   16.00        153.41        0.0350      Main Channel
                   18.00        153.58        0.0350      Main Channel
                   20.00        153.72    0.0350 /0.0450  Main Channel
                   22.00        153.77        0.0450
                   24.00        153.77        0.0450
                   26.00        153.82        0.0450
                   28.00        153.79        0.0450
                   30.00        153.87        0.0450
                   32.00        153.99        0.0450
                   34.00        154.44        0.0450
                   36.00        154.86        0.0450
                   40.00        155.37        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   153.50    .107E+03       0.0         0.27       87.23
        0.20   153.60    .429E+03       0.1         0.42       55.65
        0.29   153.70    .991E+03       0.4         0.55       42.98
        0.39   153.80    .201E+04       0.9         0.66       35.52
        0.49   153.90    .408E+04       2.1         0.71       33.15
        0.59   153.99    .651E+04       3.7         0.81       29.01
        0.69   154.09    .916E+04       6.1         0.93       25.22
        0.79   154.19    .120E+05       8.9         1.05       22.39
        0.88   154.29    .149E+05      12.3         1.16       20.20
        0.98   154.39    .179E+05      16.2         1.27       18.49
        1.08   154.49    .211E+05      20.5         1.37       17.13
        1.18   154.58    .244E+05      25.4         1.47       16.02
        1.28   154.68    .278E+05      30.7         1.56       15.10
        1.37   154.78    .314E+05      36.4         1.63       14.38
        1.47   154.88    .351E+05      42.5         1.71       13.77
        1.57   154.98    .391E+05      48.9         1.76       13.33
        1.67   155.07    .433E+05      55.6         1.81       12.98
        1.77   155.17    .478E+05      63.0         1.86       12.65
        1.86   155.27    .528E+05      69.8         1.86       12.62

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42     2.94     6.42   16.94      0.54      0.76
   OUTFLOW: ID= 1 ( 60130)  108.42     2.08     6.83   16.93      0.49      0.71


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--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area     (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       46.69         19.07
     Dep. Storage     (mm)=        2.00          6.30
     Average Slope     (%)=        1.30          1.30
     Length            (m)=      662.12         66.00
     Mannings n           =       0.015         0.290

     Max.Eff.Inten.(mm/hr)=       63.34         34.32
                   over (min)     10.00         30.00
     Storage Coeff.  (min)=        9.60 (ii)    27.79 (ii)
     Unit Hyd. Tpeak (min)=       10.00         30.00
     Unit Hyd. peak  (cms)=        0.11          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        5.62          0.89        6.051 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.33         6.00
     RUNOFF VOLUME    (mm)=       46.07         20.05        35.92
     TOTAL RAINFALL   (mm)=       48.07         48.07        48.07
     RUNOFF COEFFICIENT   =        0.96          0.42         0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76   6.051     6.00    35.92
      + ID2= 2 ( 60130):   108.42   2.080     6.83    16.93
        ================================================
        ID = 3 ( 50180):   174.18   6.323     6.00    24.10

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area     (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       10.55         3.33
     Dep. Storage     (mm)=        2.00         6.90
     Average Slope     (%)=        1.00         1.00
     Length            (m)=      304.26        66.00
     Mannings n           =       0.015        0.310

     Max.Eff.Inten.(mm/hr)=       63.34        21.63
                   over (min)      5.00        35.00
     Storage Coeff.  (min)=        6.51 (ii)   31.15 (ii)
     Unit Hyd. Tpeak (min)=        5.00        35.00
     Unit Hyd. peak  (cms)=        0.18         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.67         0.11         1.706 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.42          6.00
     RUNOFF VOLUME    (mm)=       46.07        17.81         38.44
     TOTAL RAINFALL   (mm)=       48.07        48.07         48.07
     RUNOFF COEFFICIENT   =        0.96         0.37          0.80


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area     (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        5.74         8.05
     Dep. Storage     (mm)=        2.00         8.12
     Average Slope     (%)=        2.40         2.40
     Length            (m)=      303.13       131.00
     Mannings n           =       0.015        0.350

     Max.Eff.Inten.(mm/hr)=       63.34        12.01
                   over (min)      5.00        45.00
     Storage Coeff.  (min)=        5.00 (ii)   43.90 (ii)
     Unit Hyd. Tpeak (min)=        5.00        45.00
     Unit Hyd. peak  (cms)=        0.21         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.91         0.16         0.948 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.67          6.00
     RUNOFF VOLUME    (mm)=       46.07        14.92         26.95
     TOTAL RAINFALL   (mm)=       48.07        48.07         48.07
     RUNOFF COEFFICIENT   =        0.96         0.31          0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        155.90        0.0450
                    1.00        154.69        0.0450
                    2.00        154.30        0.0450
                    3.00        154.00    0.0450 /0.0350  Main Channel
                    4.00        153.74        0.0350      Main Channel
                    5.00        153.51        0.0350      Main Channel
                    6.00        153.46        0.0350      Main Channel
                    7.00        153.77        0.0350      Main Channel
                    8.00        154.10    0.0350 /0.0450  Main Channel
                    9.00        154.50        0.0450
                   10.00        154.84        0.0450
                   11.00        155.13        0.0450
                   12.00        155.26        0.0450
                   13.00        155.32        0.0450
                   14.00        155.42        0.0450
                   15.00        155.52        0.0450
                   16.00        155.62        0.0450
                   17.00        155.69        0.0450
                   18.00        155.76        0.0450
                   20.00        155.88        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   153.57    .445E+02       0.0         0.32       21.18
        0.22   153.68    .135E+03       0.2         0.51       13.45
        0.33   153.79    .262E+03       0.4         0.66       10.46
        0.43   153.89    .423E+03       0.8         0.79        8.73
        0.54   154.00    .616E+03       1.3         0.90        7.61
        0.68   154.14    .900E+03       2.4         1.09        6.30
        0.81   154.27    .123E+04       3.8         1.27        5.40
        0.95   154.41    .160E+04       5.5         1.42        4.83
        1.08   154.54    .201E+04       7.6         1.55        4.43
        1.22   154.68    .246E+04       9.9         1.67        4.12
        1.35   154.81    .294E+04      12.7         1.78        3.86
        1.48   154.94    .345E+04      15.8         1.88        3.65
        1.62   155.08    .400E+04      19.2         1.97        3.48
        1.75   155.21    .458E+04      22.9         2.05        3.34
        1.89   155.35    .524E+04      26.8         2.11        3.26
        2.02   155.48    .599E+04      31.4         2.16        3.18
        2.16   155.62    .682E+04      36.5         2.20        3.12
        2.29   155.75    .774E+04      41.9         2.23        3.08
        2.43   155.89    .878E+04      48.0         2.25        3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     0.95     6.00   26.95      0.46      0.81
   OUTFLOW: ID= 1 ( 60190)   13.78     0.77     6.00   26.95      0.42      0.77


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--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area     (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       17.41         5.53
     Dep. Storage     (mm)=        2.00         6.75
     Average Slope     (%)=        3.00         3.00
     Length            (m)=      391.08       150.00
     Mannings n           =       0.015        0.290

     Max.Eff.Inten.(mm/hr)=       63.34        14.61
                   over (min)      5.00        40.00
     Storage Coeff.  (min)=        5.45 (ii)   38.04 (ii)
     Unit Hyd. Tpeak (min)=        5.00        40.00
     Unit Hyd. peak  (cms)=        0.20         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=        2.89         0.13         2.935 (iii)
     TIME TO PEAK    (hrs)=        6.00         6.58          6.00
     RUNOFF VOLUME    (mm)=       46.07        16.57         38.62
     TOTAL RAINFALL   (mm)=       48.07        48.07         48.07
     RUNOFF COEFFICIENT   =        0.96         0.34          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40180):    13.89   1.706     6.00    38.44
      + ID2= 2 ( 40200):    22.94   2.935     6.00    38.62
        ================================================
        ID = 3 ( 50200):    36.83   4.642     6.00    38.55
```

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09487>
09488>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09489> ------------------------------------------------------------------------------
09490>
09491> --------------------
09492> | ADD HYD  ( 50200)|
09493> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
09494> --------------------          (ha)    (cms)    (hrs)     (mm)
09495>         ID1= 3 ( 50200):    36.83   4.642     6.00    38.55
09496>       + ID2= 2 ( 60190):    13.78   0.774     6.00    26.95
09497>         ================================================
09498>         ID = 1 ( 50200):    50.61   5.415     6.00    35.39
09499>
09500>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09501> ------------------------------------------------------------------------------
09502> --------------------
09503> | CALIB            |
09504> | STANDHYD ( 40210)|   Area    (ha)=   6.07
09505> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
09506> --------------------
09507>                              IMPERVIOUS    PERVIOUS (i)
09508>      Surface Area     (ha)=       5.01         1.06
09509>      Dep. Storage     (mm)=       2.00         6.27
09510>      Average Slope     (%)=       0.90         0.90
09511>      Length            (m)=     201.21       118.00
09512>      Mannings n           =      0.015        0.290
09513>
09514>      Max.Eff.Inten.(mm/hr)=      63.34        12.34
09515>                    over (min)       5.00        50.00
09516>      Storage Coeff.  (min)=       5.25 (ii)   48.57 (ii)
09517>      Unit Hyd. Tpeak (min)=       5.00        50.00
09518>      Unit Hyd. peak  (cms)=       0.21         0.02
09519>                                                          *TOTALS*
09520>      PEAK FLOW       (cms)=       0.84         0.02          0.847 (iii)
09521>      TIME TO PEAK    (hrs)=       6.00         6.75          6.00
09522>      RUNOFF VOLUME    (mm)=      46.07        16.55         40.69
09523>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
09524>      RUNOFF COEFFICIENT   =       0.96         0.34          0.85
09525>
09526>
09527>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
09528>            CN*  =  79.0    Ia = Dep. Storage  (Above)
09529>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
09530>            THAN THE STORAGE COEFFICIENT.
09531>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
09532>
09533> ------------------------------------------------------------------------------
09534>
09535> --------------------
09536> | ADD HYD  ( 50210)|
09537> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
09538> --------------------          (ha)    (cms)    (hrs)     (mm)
09539>         ID1= 1 ( 40210):     6.07   0.847     6.00    40.69
09540>       + ID2= 2 ( 50200):    50.61   5.415     6.00    35.39
09541>         ================================================
09542>         ID = 3 ( 50210):    56.68   6.262     6.00    35.96
09543>
09544>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09545> ------------------------------------------------------------------------------
09546> --------------------
09547> | ROUTE CHN( 60210)|
09548> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
09549> --------------------
09550>                <------ DATA FOR SECTION (   1.1) ------>
09551>                Distance      Elevation       Manning
09552>                    0.00        152.62        0.0450
09553>                    7.00        152.39        0.0450
09554>                    8.00        152.02        0.0450
09555>                    9.00        151.48        0.0450
09556>                   10.00        151.01        0.0450
09557>                   11.00        150.56    0.0450 /0.0350  Main Channel
09558>                   12.00        150.38        0.0350      Main Channel
09559>                   13.00        150.40        0.0350      Main Channel
09560>                   14.00        150.36        0.0350      Main Channel
09561>                   15.00        150.60    0.0350 /0.0450  Main Channel
09562>                   16.00        150.99        0.0450
09563>                   17.00        151.50        0.0450
09564>                   18.00        151.91        0.0450
09565>                   19.00        152.65        0.0450
09566>
09567>       <---------------------- TRAVEL TIME TABLE ----------------------->
09568>        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
09569>          (m)      (m)      (cu.m.)       (cms)        (m/s)       (min)
09570>         0.10   150.46    .580E+02         0.1         0.30       17.06
09571>         0.20   150.56    .160E+03         0.3         0.48       10.57
09572>         0.32   150.68    .314E+03         0.7         0.70        7.18
09573>         0.44   150.80    .489E+03         1.4         0.89        5.71
09574>         0.56   150.92    .686E+03         2.3         1.03        4.89
09575>         0.69   151.04    .904E+03         3.5         1.16        4.35
09576>         0.81   151.16    .114E+04         4.8         1.28        3.95
09577>         0.93   151.29    .140E+04         6.4         1.38        3.66
09578>         1.05   151.41    .167E+04         8.1         1.48        3.42
09579>         1.17   151.53    .196E+04        10.1         1.57        3.22
09580>         1.29   151.65    .227E+04        12.3         1.65        3.06
09581>         1.41   151.77    .260E+04        14.8         1.73        2.93
09582>         1.54   151.89    .295E+04        17.5         1.80        2.81
09583>         1.66   152.01    .331E+04        20.4         1.87        2.70
09584>         1.78   152.13    .369E+04        23.6         1.94        2.61
09585>         1.90   152.26    .409E+04        27.0         2.00        2.52
09586>         2.02   152.38    .451E+04        30.7         2.06        2.45
09587>         2.14   152.50    .500E+04        33.4         2.03        2.49
09588>         2.26   152.62    .563E+04        37.3         2.01        2.51
09589>
09590>                                    <---- hydrograph ---->   <-pipe / channel->
09591>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
09592>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
09593>    INFLOW : ID= 2 ( 50210)   56.68     6.26     6.00   35.96      0.92      1.37
09594>    OUTFLOW: ID= 1 ( 60210)   56.68     5.94     6.00   35.96      0.90      1.35
09595>
09596>
09597>
09598> ------------------------------------------------------------------------------
09599> --------------------
09600> | CALIB            |
09601> | STANDHYD ( 40220)|   Area    (ha)=  11.32
09602> |ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
09603> --------------------
09604>                              IMPERVIOUS    PERVIOUS (i)
09605>      Surface Area     (ha)=       8.91         2.40
09606>      Dep. Storage     (mm)=       2.00         6.17
09607>      Average Slope     (%)=       0.60         0.60
09608>      Length            (m)=     274.66        79.00
09609>      Mannings n           =      0.015        0.290
09610>
09611>      Max.Eff.Inten.(mm/hr)=      63.34        13.73
09612>                    over (min)       5.00        45.00
09613>      Storage Coeff.  (min)=       7.14 (ii)   43.99 (ii)
09614>      Unit Hyd. Tpeak (min)=       5.00        45.00
09615>      Unit Hyd. peak  (cms)=       0.17         0.03
09616>                                                          *TOTALS*
09617>      PEAK FLOW       (cms)=       1.42         0.05          1.437 (iii)
09618>      TIME TO PEAK    (hrs)=       6.00         6.67          6.00
09619>      RUNOFF VOLUME    (mm)=      46.07        16.99         39.60
09620>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
09621>      RUNOFF COEFFICIENT   =       0.96         0.35          0.82
09622>
09623>
09624>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
09625>            CN*  =  79.5    Ia = Dep. Storage  (Above)
09626>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
09627>            THAN THE STORAGE COEFFICIENT.
09628>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
09629>
09630> ------------------------------------------------------------------------------
09631>
09632> --------------------
09633> | ADD HYD  ( 50120)|
09634> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
09635> --------------------          (ha)    (cms)    (hrs)     (mm)
09636>         ID1= 1 ( 40220):    11.32   1.437     6.00    39.60
09637>       + ID2= 2 ( 60210):    56.68   5.935     6.00    35.96
09638>         ================================================
09639>         ID = 3 ( 50120):    68.00   7.372     6.00    36.57
09640>
09641>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09642> ------------------------------------------------------------------------------
09643>
09644> --------------------
09645> | ADD HYD  ( 50140)|
09646> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
09647> --------------------          (ha)    (cms)    (hrs)     (mm)
09648>         ID1= 1 ( 50120):    68.00   7.372     6.00    36.57
09649>       + ID2= 2 ( 50180):   174.18   6.323     6.00    24.10
09650>         ================================================
09651>         ID = 3 ( 50140):   242.18  13.695     6.00    27.60
09652>
09653>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
09654> ------------------------------------------------------------------------------
09655> --------------------
09656> | ROUTE CHN( 60140)|
09657> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
09658> --------------------
09659>                <------ DATA FOR SECTION (   1.1) ------>
09660>                Distance      Elevation       Manning
09661>                    0.00        152.29        0.0450
09662>                    2.00        152.20        0.0450
09663>                    4.00        152.17        0.0450
09664>                    6.00        152.15        0.0450
09665>                    8.00        151.78        0.0450
09666>                   10.00        151.28        0.0450
09667>                   12.00        150.79        0.0450
09668>                   14.00        150.20    0.0450 /0.0350  Main Channel
09669>                   16.00        149.82        0.0350      Main Channel
09670>                   18.00        149.51        0.0350      Main Channel
09671>                   20.00        149.24        0.0350      Main Channel
09672>                   22.00        149.48        0.0350      Main Channel
09673>                   24.00        150.00    0.0350 /0.0450  Main Channel
09674>                   26.00        150.52        0.0450
09675>                   28.00        151.14        0.0450
09676>                   30.00        151.68        0.0450
09677>                   32.00        152.11        0.0450
09678>                   34.00        152.20        0.0450
09679>                   35.00        152.27        0.0450
09680>                   38.00        152.30        0.0450
09681>
09682>       <---------------------- TRAVEL TIME TABLE ----------------------->
09683>        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
09684>          (m)      (m)      (cu.m.)       (cms)        (m/s)       (min)
09685>         0.15   149.39    .694E+02         0.1         0.32       19.63
09686>         0.31   149.54    .273E+03         0.4         0.53       11.92
09687>         0.46   149.70    .577E+03         1.1         0.72        8.87
09688>         0.61   149.85    .972E+03         2.2         0.87        7.30
09689>         0.76   150.00    .145E+04         3.9         1.01        6.26
09690>         0.93   150.16    .205E+04         6.4         1.18        5.36
09691>         1.09   150.33    .274E+04         9.9         1.37        4.62
09692>         1.25   150.49    .350E+04        14.2         1.54        4.11
09693>         1.42   150.65    .434E+04        19.3         1.69        3.75
09694>         1.58   150.82    .524E+04        25.2         1.83        3.47
09695>         1.74   150.98    .621E+04        31.8         1.95        3.26
09696>         1.91   151.14    .726E+04        39.2         2.06        3.09
09697>         2.07   151.31    .839E+04        47.5         2.16        2.94
09698>         2.23   151.47    .959E+04        56.6         2.25        2.82
09699>         2.40   151.63    .109E+05        66.7         2.34        2.72
09700>         2.56   151.80    .122E+05        77.6         2.41        2.63
09701>         2.72   151.96    .137E+05        89.3         2.48        2.55
09702>         2.89   152.12    .153E+05       102.0         2.55        2.49
09703>         3.05   152.29    .172E+05       111.6         2.47        2.57
09704>
09705>                                    <---- hydrograph ---->   <-pipe / channel->
09706>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
09707>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
09708>    INFLOW : ID= 2 ( 50140)  242.18    13.70     6.00   27.60      1.23      1.52
09709>    OUTFLOW: ID= 1 ( 60140)  242.18    12.75     6.08   27.60      1.20      1.48
09710>
09711>
09712>
09713> ------------------------------------------------------------------------------
09714> --------------------
09715> | ROUTE CHN( 60150)|
09716> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
09717> --------------------
09718>                <------ DATA FOR SECTION (   1.1) ------>
09719>                Distance      Elevation       Manning
09720>                    0.00        151.02        0.0450
09721>                    2.00        150.89        0.0450
09722>                    4.00        150.73        0.0450
09723>                    6.00        150.65        0.0450
09724>                    8.00        150.38        0.0450
09725>                   10.00        149.93        0.0450
09726>                   12.00        149.51        0.0450
09727>                   14.00        149.02    0.0450 /0.0350  Main Channel
09728>                   16.00        148.64        0.0350      Main Channel
09729>                   18.00        148.27        0.0350      Main Channel
09730>                   20.00        148.39        0.0350      Main Channel
09731>                   22.00        148.60        0.0350      Main Channel
09732>                   24.00        148.94    0.0350 /0.0450  Main Channel
09733>                   26.00        149.34        0.0450
09734>                   28.00        149.66        0.0450
09735>                   30.00        150.12        0.0450
09736>                   32.00        150.45        0.0450
09737>                   34.00        150.52        0.0450
09738>                   36.00        150.60        0.0450
09739>                   38.00        150.60        0.0450
09740>
09741>       <---------------------- TRAVEL TIME TABLE ----------------------->
09742>        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
09743>          (m)      (m)      (cu.m.)       (cms)        (m/s)       (min)
09744>         0.11   148.38    .283E+02         0.0         0.26       13.34
09745>         0.22   148.49    .107E+03         0.2         0.44        7.98
09746>         0.34   148.60    .226E+03         0.6         0.58        6.07
09747>         0.45   148.72    .380E+03         1.3         0.72        4.90
09748>         0.56   148.83    .563E+03         2.2         0.84        4.20
09749>         0.67   148.94    .775E+03         3.5         0.95        3.72
09750>         0.80   149.07    .105E+04         5.5         1.11        3.17
09751>         0.93   149.20    .136E+04         8.2         1.27        2.77
09752>         1.06   149.32    .170E+04        11.3         1.41        2.50
09753>         1.18   149.45    .207E+04        14.9         1.52        2.31
09754>         1.31   149.58    .248E+04        19.1         1.63        2.17
09755>         1.44   149.71    .292E+04        23.8         1.72        2.05
09756>         1.57   149.83    .340E+04        29.1         1.81        1.95
09757>         1.70   149.96    .391E+04        34.9         1.89        1.87
09758>         1.82   150.09    .445E+04        41.4         1.97        1.79
09759>         1.95   150.22    .502E+04        48.4         2.04        1.73
09760>         2.08   150.35    .563E+04        56.0         2.10        1.67
09761>         2.21   150.47    .628E+04        63.9         2.15        1.64
09762>         2.33   150.60    .702E+04        71.1         2.14        1.64
09763>
09764>                                    <---- hydrograph ---->   <-pipe / channel->
09765>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
09766>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
09767>    INFLOW : ID= 2 ( 60140)  242.18    12.75     6.08   27.60      1.11      1.45
09768>    OUTFLOW: ID= 1 ( 60150)  242.18    12.79     6.08   27.60      1.11      1.45
09769>
09770>
09771>
09772> ------------------------------------------------------------------------------
09773> --------------------
09774> | CALIB            |
09775> | STANDHYD ( 40150)|   Area    (ha)=   5.37
09776> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
09777> --------------------
09778>                              IMPERVIOUS    PERVIOUS (i)
09779>      Surface Area     (ha)=       3.11         2.26
09780>      Dep. Storage     (mm)=       2.00         6.34
09781>      Average Slope     (%)=       2.30         2.30
09782>      Length            (m)=     189.18        45.00
09783>      Mannings n           =      0.015        0.290
09784>
09785>      Max.Eff.Inten.(mm/hr)=      63.34        32.54
09786>                    over (min)       5.00        20.00
09787>      Storage Coeff.  (min)=       3.82 (ii)   16.26 (ii)
09788>      Unit Hyd. Tpeak (min)=       5.00        20.00
09789>      Unit Hyd. peak  (cms)=       0.25         0.06
09790>                                                          *TOTALS*
09791>      PEAK FLOW       (cms)=       0.49         0.11          0.562 (iii)
09792>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
```

```
      RUNOFF VOLUME    (mm)=      46.07        18.33          32.79
      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
      RUNOFF COEFFICIENT   =       0.96         0.38           0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40150):     5.37   0.562     6.00    32.79
      + ID2= 2 ( 60150):   242.18  12.794     6.08    27.60
        ================================================
        ID = 3 ( 50160):   247.54  13.075     6.08    27.71

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40240)|   Area    (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.79         1.50
      Dep. Storage     (mm)=       2.00         5.70
      Average Slope     (%)=       3.40         3.40
      Length            (m)=     261.85        70.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=      63.34        27.82
                over (min)        5.00        20.00
      Storage Coeff.  (min)=       4.12 (ii)   18.84 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.24         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.51         0.06          1.549 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
      RUNOFF VOLUME    (mm)=      46.07        17.23         41.71
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.36          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.6    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40250)|   Area    (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.61         4.75
      Dep. Storage     (mm)=       2.00         7.14
      Average Slope     (%)=       2.00         2.00
      Length            (m)=     298.43        70.00
      Mannings n           =      0.015        0.320

      Max.Eff.Inten.(mm/hr)=      63.34        17.62
                over (min)        5.00        30.00
      Storage Coeff.  (min)=       5.23 (ii)   28.16 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.21         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.42         0.13          1.482 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
      RUNOFF VOLUME    (mm)=      46.07        15.86         34.86
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.33          0.73

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.56        0.0450
                   2.00        155.23        0.0450
                   4.00        154.58        0.0450
                   6.00        153.92        0.0450
                   8.00        153.53        0.0450
                  10.00        152.64        0.0450
                  12.00        152.43    0.0450 /0.0350  Main Channel
                  14.00        152.24        0.0350      Main Channel
                  16.00        152.07        0.0350      Main Channel
                  18.00        152.30    0.0350 /0.0450  Main Channel
                  20.00        152.46        0.0450
                  22.00        155.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   152.18    .895E+02        0.1          0.43      24.33
        0.24   152.30    .356E+03        0.4          0.69      15.20
        0.43   152.49    .118E+04        2.1          1.10       9.55
        0.62   152.68    .234E+04        5.5          1.48       7.09
        0.81   152.88    .361E+04       10.4          1.83       5.76
        1.00   153.07    .494E+04       16.7          2.13       4.94
        1.19   153.26    .634E+04       24.2          2.40       4.38
        1.38   153.45    .781E+04       32.8          2.65       3.97
        1.58   153.64    .936E+04       42.5          2.86       3.67
        1.77   153.83    .110E+05       53.3          3.05       3.45
        1.96   154.02    .128E+05       65.6          3.23       3.26
        2.15   154.21    .147E+05       79.4          3.40       3.09
        2.34   154.40    .167E+05       94.5          3.57       2.95
        2.53   154.60    .188E+05      111.0          3.73       2.82
        2.72   154.79    .209E+05      128.7          3.89       2.71
        2.91   154.98    .231E+05      147.8          4.03       2.61
        3.10   155.17    .255E+05      168.3          4.17       2.52
        3.30   155.36    .279E+05      189.2          4.28       2.46
        3.49   155.55    .305E+05      211.3          4.38       2.40

                                   <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     1.48     6.00   34.86      0.36      0.91
   OUTFLOW: ID= 1 ( 60240)   13.36     1.04     6.00   34.85      0.31      0.81


--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40240):    10.28    1.549     6.00    41.71
      + ID2= 2 ( 50160):   247.54   13.075     6.08    27.71
        ================================================
        ID = 3 ( 50250):   257.83   13.724     6.08    28.27

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50250):   257.83   13.724     6.08    28.27
      + ID2= 2 ( 60240):    13.36    1.043     6.00    34.85
        ================================================
        ID = 1 ( 50250):   271.19   14.767     6.08    28.60

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        149.47        0.0450
                   3.00        149.39        0.0450
                   6.00        149.18        0.0450
                   9.00        148.85        0.0450
                  12.00        148.60        0.0450
                  15.00        148.16        0.0450
                  18.00        147.81        0.0450
                  21.00        147.50        0.0450
                  24.00        147.26        0.0350      Main Channel
                  27.00        146.88        0.0350      Main Channel
                  30.00        146.72        0.0350      Main Channel
                  33.00        147.27    0.0350 /0.0450  Main Channel
                  36.00        147.60        0.0450
                  39.00        147.71        0.0450
                  42.00        148.10        0.0450
                  45.00        148.90        0.0450
                  48.00        149.05        0.0450
                  51.00        149.12        0.0450
                  54.00        149.43        0.0450
                  57.00        149.67        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14   146.85    .156E+03        0.1          0.30      40.24
        0.27   146.99    .583E+03        0.4          0.51      23.51
        0.41   147.13    .119E+04        1.1          0.68      17.78
        0.54   147.26    .198E+04        2.2          0.82      14.76
        0.69   147.41    .309E+04        4.3          1.02      11.88
        0.84   147.56    .455E+04        7.2          1.15      10.50
        0.98   147.70    .637E+04       10.9          1.24       9.73
        1.13   147.85    .862E+04       15.8          1.32       9.12
        1.28   148.00    .111E+05       21.7          1.41       8.55
        1.42   148.14    .139E+05       28.7          1.50       8.06
        1.57   148.29    .169E+05       37.1          1.59       7.58
        1.72   148.44    .200E+05       46.5          1.68       7.16
        1.87   148.58    .233E+05       57.0          1.77       6.80
        2.01   148.73    .268E+05       68.3          1.85       6.53
        2.16   148.88    .305E+05       80.9          1.92       6.28
        2.31   149.02    .345E+05       93.2          1.95       6.17
        2.45   149.17    .391E+05      106.6          1.97       6.11
        2.60   149.32    .441E+05      123.2          2.02       5.97
        2.75   149.47    .495E+05      139.7          2.04       5.91

                                   <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    14.77     6.08   28.60      1.10      1.30
   OUTFLOW: ID= 1 ( 60250)  271.19    12.47     6.17   28.59      1.03      1.26


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--------------------
| CALIB            |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      15.93        12.52
      Dep. Storage     (mm)=       2.00         6.70
      Average Slope     (%)=       1.30         1.30
      Length            (m)=     435.49        46.00
      Mannings n           =      0.015        0.300

      Max.Eff.Inten.(mm/hr)=      63.34        38.89
                over (min)        5.00        25.00
      Storage Coeff.  (min)=       7.47 (ii)   21.68 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.17         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.96         0.63          2.311 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      46.07        19.19         30.75
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.40          0.64

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40260):    28.45    2.311     6.00    30.75
      + ID2= 2 ( 60250):   271.19   12.475     6.17    28.59
        ================================================
        ID = 3 ( 50260):   299.64   13.781     6.17    28.80

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        143.17        0.0450
                   4.00        143.15        0.0450
                   8.00        143.14        0.0450
                  12.00        142.95        0.0450
                  16.00        142.87        0.0450
                  20.00        142.67        0.0450
                  24.00        142.24        0.0450
                  28.00        141.84        0.0450
                  32.00        141.61        0.0450
                  36.00        141.32        0.0450
                  40.00        140.98        0.0450
                  44.00        140.88        0.0450
                  48.00        139.95        0.0350      Main Channel
                  52.00        140.09        0.0350      Main Channel
                  56.00        141.11        0.0450
                  60.00        141.43        0.0450
                  76.00        143.21        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.17   140.12    .479E+03        0.2          0.48      36.89
        0.34   140.29    .147E+04        1.2          0.86      20.63
        0.51   140.46    .272E+04        2.9          1.12      15.78
        0.68   140.63    .421E+04        5.3          1.33      13.28
        0.85   140.80    .596E+04        8.5          1.51      11.69
        1.02   140.97    .812E+04       12.0          1.56      11.29
        1.19   141.14    .111E+05       17.6          1.68      10.52
        1.36   141.31    .147E+05       25.4          1.83       9.67
        1.53   141.48    .191E+05       34.9          1.93       9.14
        1.70   141.65    .242E+05       46.4          2.03       8.71
        1.87   141.81    .301E+05       59.9          2.11       8.38
```

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        2.04   141.98    .367E+05      76.6          2.21       7.99
        2.21   142.15    .439E+05      95.9          2.31       7.63
        2.37   142.32    .517E+05     117.9          2.42       7.30
        2.54   142.49    .600E+05     142.7          2.52       7.01
        2.71   142.66    .689E+05     170.3          2.62       6.74
        2.88   142.83    .785E+05     198.2          2.68       6.60
        3.05   143.00    .892E+05     225.9          2.68       6.58
        3.22   143.17    .101E+06     250.7          2.63       6.73

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50260)  299.64    13.78    6.17  28.80      1.07      1.60
   OUTFLOW: ID= 1 ( 60260)  299.64    11.82    6.33  28.80      1.01      1.56


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--------------------
| CALIB            |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12         6.71
     Dep. Storage     (mm)=       2.00         8.03
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     256.01        73.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      63.34        19.32
                   over (min)       5.00        35.00
     Storage Coeff.  (min)=       5.71 (ii)   33.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.20         0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.36         0.21          0.441 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.50          6.00
     RUNOFF VOLUME    (mm)=      46.07        17.86         24.07
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.37          0.50


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40270):     9.83   0.441     6.00    24.07
     + ID2= 2 ( 60260):   299.64  11.816     6.33    28.80
       ================================================
       ID = 3 ( 50270):   309.47  12.070     6.33    28.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.16        11.14
     Dep. Storage     (mm)=       2.00         7.27
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     456.83        53.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=      63.34        31.63
                   over (min)      10.00        30.00
     Storage Coeff.  (min)=       8.08 (ii)   26.11 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.13         0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.39         0.49          2.623 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33          6.00
     RUNOFF VOLUME    (mm)=      46.07        18.38         32.68
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.38          0.68


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40280):    31.30   2.623     6.00    32.68
     + ID2= 2 ( 50270):   309.47  12.070     6.33    28.65
       ================================================
       ID = 3 ( 50280):   340.77  13.364     6.25    29.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         139.35        0.0450
                  3.00         139.19        0.0450
                  6.00         138.46        0.0450
                 27.00         137.71        0.0450
                 30.00         137.44        0.0350      Main Channel
                 33.00         137.26        0.0350      Main Channel
                 36.00         137.51        0.0350      Main Channel
                 39.00         137.64    0.0350 /0.0450  Main Channel
                 42.00         137.71        0.0450
                 57.00         139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   137.35    .361E+02       0.0          0.30      17.09
       0.18   137.44    .145E+03       0.2          0.48      10.76
       0.30   137.55    .369E+03       0.8          0.68       7.57
       0.41   137.67    .717E+03       1.9          0.82       6.28
       0.52   137.78    .124E+04       3.9          0.97       5.27
       0.63   137.89    .192E+04       6.8          1.10       4.67
       0.74   138.00    .273E+04      10.7          1.20       4.25
       0.86   138.11    .369E+04      15.7          1.30       3.93
       0.97   138.23    .480E+04      21.8          1.39       3.67
       1.08   138.34    .605E+04      29.1          1.48       3.46
       1.19   138.45    .745E+04      37.8          1.56       3.28
       1.31   138.56    .895E+04      48.6          1.67       3.07
       1.42   138.68    .105E+05      60.8          1.78       2.88
       1.53   138.79    .121E+05      74.4          1.89       2.71
       1.64   138.90    .138E+05      89.3          1.99       2.57
       1.76   139.01    .155E+05     105.5          2.10       2.44
       1.87   139.13    .172E+05     123.0          2.19       2.33
       1.98   139.24    .190E+05     140.8          2.27       2.25
       2.09   139.35    .209E+05     159.0          2.33       2.20

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    13.36    6.25  29.02      0.80      1.25
   OUTFLOW: ID= 1 ( 60280)  340.77    13.24    6.33  29.02      0.80      1.25


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.71         4.81
     Dep. Storage     (mm)=       2.00         7.99
     Average Slope     (%)=       1.60         1.60
     Length            (m)=     277.19        63.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=      63.34        28.95
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       5.35 (ii)   24.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.21         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.88         0.20          0.987 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25          6.00
     RUNOFF VOLUME    (mm)=      46.07        17.36         30.27
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.36          0.63


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40300):    11.53   0.987     6.00    30.27
     + ID2= 2 ( 60280):   340.77  13.242     6.33    29.02
       ================================================
       ID = 3 ( 50300):   352.30  13.589     6.33    29.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         137.26        0.0450
                  4.00         136.94        0.0450
                  8.00         136.82        0.0450
                 12.00         136.69        0.0450
                 16.00         136.55        0.0450
                 36.00         135.52        0.0350      Main Channel
                 64.00         136.21        0.0450
                 75.00         136.49        0.0450
                 84.00         137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   135.61    .491E+02       0.1          0.26      12.99
       0.18   135.70    .196E+03       0.4          0.42       8.18
       0.27   135.79    .442E+03       1.2          0.55       6.24
       0.36   135.88    .785E+03       2.5          0.66       5.15
       0.45   135.97    .123E+04       4.6          0.77       4.44
       0.53   136.06    .177E+04       7.5          0.87       3.93
       0.62   136.15    .240E+04      11.3          0.96       3.55
       0.71   136.24    .314E+04      16.4          1.07       3.19
       0.80   136.32    .397E+04      23.3          1.20       2.84
       0.89   136.41    .490E+04      31.4          1.32       2.60
       0.98   136.50    .592E+04      40.8          1.42       2.41
       1.07   136.59    .701E+04      51.5          1.51       2.27
       1.16   136.68    .816E+04      63.4          1.59       2.14
       1.25   136.77    .938E+04      76.6          1.67       2.04
       1.34   136.86    .107E+05      91.2          1.75       1.95
       1.42   136.95    .120E+05     107.3          1.83       1.87
       1.51   137.04    .135E+05     125.8          1.91       1.78
       1.60   137.13    .149E+05     145.6          2.00       1.71
       1.69   137.22    .164E+05     166.8          2.08       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30    13.59    6.33  29.06      0.66      1.01
   OUTFLOW: ID= 1 ( 60300)  352.30    13.46    6.33  29.06      0.66      1.01


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77         6.39
     Dep. Storage     (mm)=       2.00         8.38
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     247.21        43.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      63.34        28.38
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.06 (ii)   17.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.37         0.27          0.547 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      46.07        16.49         23.45
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.34          0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40290):     9.17   0.547     6.00    23.45
     + ID2= 2 ( 60300):   352.30  13.456     6.33    29.06
       ================================================
       ID = 3 ( 50340):   361.46  13.730     6.33    28.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50110):   346.28   6.902     6.25    28.80
     + ID2= 2 ( 50340):   361.46  13.730     6.33    28.92
       ================================================
       ID = 3 ( 50350):   707.75  20.255     6.33    28.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60350)|
```

```
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         134.05        0.0450
                   24.00         133.67        0.0450
                   30.00         131.85        0.0450
                   36.00         131.42        0.0450
                   42.00         130.48        0.0450
                   48.00         130.42        0.0350      Main Channel
                   54.00         130.42        0.0350      Main Channel
                   60.00         130.62        0.0450
                   66.00         130.77        0.0450
                   72.00         131.03        0.0450
                   78.00         131.43        0.0450
                   84.00         131.38        0.0450
                   90.00         131.33        0.0450
                   96.00         131.98        0.0450
                  102.00         133.31        0.0450
                  120.00         133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.00   130.42    .133E+02        0.0         0.03     768.63
        0.19   130.61    .383E+04        1.6         0.61      40.07
        0.37   130.79    .994E+04        6.6         0.97      25.18
        0.56   130.98    .179E+05       15.1         1.23      19.81
        0.75   131.16    .272E+05       27.2         1.46      16.72
        0.93   131.35    .377E+05       42.2         1.64      14.88
        1.12   131.54    .521E+05       60.9         1.71      14.26
        1.30   131.72    .683E+05       87.2         1.86      13.07
        1.49   131.91    .857E+05      119.1         2.03      11.99
        1.68   132.09    .104E+06      157.8         2.22      10.96
        1.86   132.28    .122E+06      201.6         2.41      10.11
        2.05   132.47    .141E+06      250.1         2.59       9.41
        2.23   132.65    .160E+06      303.1         2.76       8.82
        2.42   132.84    .180E+06      360.6         2.93       8.32
        2.61   133.02    .200E+06      422.5         3.08       7.90
        2.79   133.21    .221E+06      488.7         3.24       7.53
        2.98   133.40    .242E+06      552.2         3.34       7.29
        3.16   133.58    .264E+06      613.6         3.40       7.17
        3.35   133.77    .288E+06      658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    20.26    6.33  28.86      0.64      1.32
   OUTFLOW: ID= 1 ( 60350)  707.75    18.03    6.50  28.85      0.61      1.28


--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.116 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.478
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.80   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.048 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.463
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      63.34       126.22
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.49 (ii)    3.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.27
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.15          0.257 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      46.07        33.66          38.12
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.70           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.15     0.00     0.00     0.00     0.00     0.15
        0.15     1.00     0.00     0.00     0.00     1.15
        0.15   100.00     0.00     0.00     0.00   100.15

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    1.62      0.26      6.00    38.12
     ================================================
     ID= 2  (   2)    :    1.41      0.15      6.00    38.12
     ID= 3  (   2)    :    0.21      0.10      6.00    38.12
     ID= 4  (   2)    :    0.00      0.00      0.00     0.00
     ID= 5  (   2)    :    0.00      0.00      0.00     0.00
     ID= 6  (   2)    :    0.00      0.00      0.00     0.00

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80   0.048     6.08    21.46
      + ID2= 2 (******):     1.41   0.154     6.00    38.12
        ================================================
        ID = 3 (******):     2.21   0.197     6.00    32.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22   0.116     6.17    21.48
      + ID2= 2 (******):     2.21   0.197     6.00    32.10
        ================================================
        ID = 3 (******):     4.43   0.292     6.00    26.78

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                            AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    4.43      0.29      6.00    26.78
     ================================================
     ID= 2  (   2)    :    2.22      0.15      6.00    26.78
     ID= 3  (   2)    :    2.22      0.15      6.00    26.78
     ID= 4  (   2)    :    0.00      0.00      0.00     0.00
     ID= 5  (   2)    :    0.00      0.00      0.00     0.00
     ID= 6  (   2)    :    0.00      0.00      0.00     0.00

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.03   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.059 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.471
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.059     6.08    21.47
      + ID2= 2 (******):     2.22   0.146     6.00    26.78
        ================================================
        ID = 3 (******):     3.25   0.196     6.00    25.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.041 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.429
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.041     6.08    21.43
      + ID2= 2 (******):     2.22   0.146     6.00    26.78
        ================================================
        ID = 3 (******):     2.83   0.186     6.00    25.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.034 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.449
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.020 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.329
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.444

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.020     6.00    21.33
      + ID2= 2 (******):     0.54   0.034     6.08    21.45
        ================================================
        ID = 3 (******):     0.80   0.052     6.00    21.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.80   0.052     6.00    21.41
      + ID2= 2 (******):     2.83   0.186     6.00    25.63
        ================================================
        ID = 1 (******):     3.63   0.238     6.00    24.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.115 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.476
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.061 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.463
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.29   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.17

     Unit Hyd Qpeak  (cms)=   0.065

     PEAK FLOW       (cms)=   0.020 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.413
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.445

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD (******)|   Area     (ha)=   3.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
---------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         0.65
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n            =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      63.34       186.25
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.49 (ii)    2.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.28
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.26         0.34          0.602 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      46.07        36.87          40.64
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.77           0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.37     0.00     0.00     0.00     0.00     0.37
       0.37     1.00     0.00     0.00     0.00     1.37
       0.37   100.00     0.00     0.00     0.00   100.37

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   3.63      0.60      6.00   40.64
     ====================================================
     ID= 2  (   2)    :   3.18      0.37      6.00   40.64
     ID= 3  (   2)    :   0.45      0.23      6.00   40.64
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.29   0.020     6.00    21.41
      + ID2= 2 (******):     3.18   0.373     6.00    40.64
        ====================================================
        ID = 3 (******):     3.47   0.393     6.00    39.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.01   0.061     6.08    21.46
      + ID2= 2 (******):     3.47   0.393     6.00    39.04
        ====================================================
        ID = 3 (******):     4.48   0.447     6.00    35.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.16   0.115     6.08    21.48
      + ID2= 2 (******):     4.48   0.447     6.00    35.08
        ====================================================
        ID = 3 (******):     6.64   0.544     6.00    30.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.113 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.045 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.450
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD (******)|   Area     (ha)=   8.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
---------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.21         0.08
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n            =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      63.34        37.96
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.49 (ii)    1.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.32
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.44         0.01          1.453 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      46.07        22.64          45.84
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.47           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD (******)|   Area     (ha)=   1.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
---------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.01
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n            =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      63.34        37.96
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.49 (ii)    1.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.32
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.00          0.209 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      46.07        22.64          45.84
     TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
     RUNOFF COEFFICIENT   =       0.96         0.47           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.71   0.045     6.08    21.45
      + ID2= 2 (******):     1.92   0.113     6.08    21.47
        ====================================================
        ID = 3 (******):     2.63   0.158     6.08    21.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.63   0.158     6.08    21.46
      + ID2= 2 (******):     8.29   1.453     6.00    45.84
        ====================================================
        ID = 1 (******):    10.92   1.594     6.00    39.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    10.92   1.594     6.00    39.97
      + ID2= 2 (******):     1.19   0.209     6.00    45.84
        ====================================================
        ID = 3 (******):    12.11   1.803     6.00    40.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    12.11   1.803     6.00    40.54
      + ID2= 2 (******):     3.25   0.196     6.00    25.10
        ====================================================
        ID = 1 (******):    15.36   1.999     6.00    37.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    15.36   1.999     6.00    37.28
      + ID2= 2 (******):     3.63   0.238     6.00    24.70
        ====================================================
        ID = 3 (******):    18.98   2.237     6.00    34.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
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|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    18.98   2.237     6.00    34.87
     + ID2= 2 (******):     6.64   0.544     6.00    30.65
       ====================================================
       ID = 1 (******):    25.62   2.781     6.00    33.78

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    1.0509      1.2511
                          0.0499      0.1231   |    1.2225      1.4841
                          0.0887      0.3106   |    1.2743      1.5652
                          0.1027      0.4143   |    1.3240      1.6479
                          0.1415      0.5824   |    1.5681      1.7322
                          0.4137      0.7655   |    1.9730      1.8182
                          0.8423      1.0330   |    2.4824      1.9059

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
 INFLOW : ID= 2 (******)     25.624     2.781      6.00      33.78
 OUTFLOW: ID= 1 (******)     25.624     0.164      8.00      33.76
 OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.89
                TIME SHIFT OF PEAK FLOW         (min)=120.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.5977

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30361002) |
  --------------------------

                          AREA     QPEAK   TPEAK     R.V.
                          (ha)     (cms)    (hrs)     (mm)
 INFLOW : ID= 3(30361001)    0.00     0.00    0.00     0.00
 OUTFLOW: ID= 2(30361002)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.70   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.127

     PEAK FLOW       (cms)=   0.044 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.457
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
       ID1= 1 (******):    25.62   0.164     8.00    33.76
     + ID2= 2 (******):     0.00   0.000     0.00     0.00
       ====================================================
       ID = 3 ( 50360):    25.62   0.164     8.00    33.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50360):    25.62   0.164     8.00    33.76
     + ID2= 2 (******):     0.70   0.044     6.08    21.46
       ====================================================
       ID = 1 ( 50360):    26.32   0.168     8.00    33.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50360):    26.32   0.168     8.00    33.43
     + ID2= 2 ( 60350):   707.75  18.034     6.50    28.85
       ====================================================
       ID = 3 ( 50360):   734.07  18.183     6.50    29.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.30        0.0450
                   6.00         127.39        0.0450
                  12.00         127.46        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04        0.0450
                  72.00         123.15        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.09   122.98    .246E+03        0.4        0.31      10.02
       0.33   123.21    .251E+04       11.8        0.86       3.57
       0.56   123.45    .538E+04       39.9        1.37       2.25
       0.80   123.68    .842E+04       81.1        1.78       1.73
       1.04   123.92    .116E+05      134.5        2.13       1.44
       1.27   124.16    .150E+05      200.0        2.46       1.25
       1.51   124.39    .185E+05      278.3        2.78       1.11
       1.74   124.63    .220E+05      367.4        3.08       1.00
       1.98   124.86    .257E+05      466.7        3.35       0.92
       2.22   125.10    .294E+05      576.1        3.61       0.85
       2.45   125.34    .332E+05      695.4        3.86       0.80
       2.69   125.57    .371E+05      824.8        4.10       0.75
       2.92   125.81    .410E+05      963.8        4.33       0.71
       3.16   126.04    .451E+05     1112.3        4.55       0.68
       3.39   126.28    .492E+05     1270.1        4.76       0.65
       3.63   126.51    .534E+05     1437.3        4.97       0.62
       3.87   126.75    .576E+05     1613.7        5.16       0.60
       4.10   126.99    .620E+05     1791.1        5.33       0.58
       4.34   127.22    .665E+05     1970.4        5.47       0.56
```

```
                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50360)  734.07    18.18    6.50  29.02      0.38       0.94
   OUTFLOW: ID= 1 ( 60390)  734.07    18.12    6.58  29.02      0.38       0.94


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 80.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   0.930 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  15.436
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.321

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40390):    20.55   0.930     6.08    15.44
     + ID2= 2 ( 60390):   734.07  18.122     6.58    29.02
       ====================================================
       ID = 3 ( 50390):   754.62  18.416     6.58    28.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
-------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83          6.10
     Dep. Storage     (mm)=       2.00          6.08
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     345.74         42.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      63.34         48.69
                over (min)        5.00         20.00
     Storage Coeff.  (min)=       6.23 (ii)    17.54 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.19          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.55          0.44          1.859 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      46.07         22.13          34.66
     TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
     RUNOFF COEFFICIENT   =       0.96          0.46           0.72


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         127.70        0.0450
                 18.00         126.87        0.0450
                 24.00         125.30        0.0450
                 30.00         123.90        0.0450
                 36.00         123.14        0.0450
                 42.00         123.07        0.0450
                 48.00         122.88        0.0450
                 54.00         122.90        0.0450
                 60.00         122.95        0.0450
                 66.00         123.04    0.0450 /0.0350  Main Channel
                 72.00         122.86        0.0350      Main Channel
                 78.00         122.98        0.0450
                 84.00         122.97        0.0450
                 90.00         122.96        0.0450
                 96.00         122.92        0.0450
                102.00         123.50        0.0450
                108.00         124.18        0.0450
                120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.12   122.98    .275E+03        0.7        0.35       6.78
       0.36   123.21    .218E+04       14.7        0.95       2.47
       0.59   123.45    .437E+04       44.6        1.44       1.63
       0.83   123.68    .670E+04       87.2        1.84       1.28
       1.06   123.92    .916E+04      141.6        2.19       1.08
       1.30   124.16    .117E+05      208.1        2.51       0.94
       1.54   124.39    .144E+05      287.0        2.82       0.84
       1.77   124.63    .171E+05      376.7        3.11       0.76
       2.01   124.86    .199E+05      476.5        3.38       0.70
       2.24   125.10    .228E+05      586.1        3.64       0.65
       2.48   125.33    .257E+05      705.6        3.88       0.61
       2.71   125.57    .287E+05      835.1        4.12       0.57
       2.95   125.80    .317E+05      974.0        4.35       0.54
       3.19   126.04    .348E+05     1122.3        4.56       0.52
       3.42   126.28    .379E+05     1279.8        4.77       0.49
       3.66   126.51    .411E+05     1446.6        4.97       0.47
       3.89   126.75    .444E+05     1622.6        5.17       0.46
       4.13   126.98    .477E+05     1786.6        5.29       0.45
       4.36   127.22    .513E+05     1942.9        5.36       0.44
```

```
                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     1.86    6.00  34.66      0.14       0.37
   OUTFLOW: ID= 1 ( 60370)   17.93     1.52    6.08  34.66      0.14       0.36


--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50390):   754.62  18.416     6.58    28.65
     + ID2= 2 ( 60370):    17.93   1.516     6.08    34.66
       ====================================================
       ID = 3 ( 50400):   772.55  19.016     6.50    28.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         125.01        0.0450
                 20.00         123.70        0.0450
                 25.00         123.04        0.0450
                 30.00         120.84        0.0450
                 35.00         119.81    0.0450 /0.0350  Main Channel
                 40.00         119.74        0.0350      Main Channel
                 65.00         120.12        0.0450
                 90.00         120.58        0.0450
```

```
                100.00        125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.07   119.81    .209E+03        0.1         0.27      34.81
        0.35   120.09    .326E+04        4.7         0.83      11.50
        0.62   120.36    .916E+04       21.3         1.34       7.16
        0.90   120.63    .176E+05       51.5         1.68       5.69
        1.17   120.91    .270E+05       96.6         2.05       4.67
        1.44   121.18    .367E+05      153.8         2.41       3.98
        1.72   121.46    .466E+05      222.1         2.74       3.50
        1.99   121.73    .567E+05      300.7         3.05       3.14
        2.26   122.00    .669E+05      389.1         3.34       2.87
        2.54   122.28    .774E+05      487.1         3.62       2.65
        2.81   122.55    .880E+05      594.2         3.88       2.47
        3.09   122.82    .988E+05      710.4         4.13       2.32
        3.36   123.10    .110E+06      834.4         4.36       2.20
        3.63   123.37    .121E+06      964.4         4.57       2.10
        3.91   123.65    .133E+06     1104.4         4.76       2.01
        4.18   123.92    .145E+06     1250.0         4.93       1.94
        4.45   124.19    .159E+06     1406.7         5.09       1.88
        4.73   124.47    .172E+06     1575.5         5.25       1.82
        5.00   124.74    .187E+06     1756.1         5.39       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  772.55    19.02    6.50  28.79      0.58      1.23
   OUTFLOW: ID= 1 ( 60400)  772.55    18.98    6.58  28.79      0.58      1.23
```

```
| CALIB             |
| STANDHYD ( 40410)|   Area    (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      63.34         9.00
                over (min)        5.00       140.00
     Storage Coeff.  (min)=       5.35 (ii)  139.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00       140.00
     Unit Hyd. peak  (cms)=       0.21         0.01
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.34         0.04          0.338 (iii)
     TIME TO PEAK    (hrs)=       6.00         8.25          6.00
     RUNOFF VOLUME    (mm)=      46.07        14.37         22.31
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.30          0.46

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40410):     7.92   0.338     6.00    22.31
     + ID2= 2 ( 60400):   772.55  18.976     6.58    28.79
       ================================================
       ID = 3 ( 50410):   780.47  19.020     6.58    28.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB             |
| NASHYD   (******)|   Area    (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.071 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.474
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB             |
| NASHYD   (******)|   Area    (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.197

     PEAK FLOW       (cms)=   0.071 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.471
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB             |
| NASHYD   (******)|   Area    (ha)=   4.12   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.477

     PEAK FLOW       (cms)=   0.188 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.485
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     4.12   0.188     6.17    21.49
     + ID2= 2 (******):     1.24   0.071     6.08    21.47
       ================================================
       ID = 3 (******):     5.36   0.256     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     5.36   0.256     6.17    21.48
     + ID2= 2 (******):     1.28   0.071     6.08    21.47
       ================================================
       ID = 1 (******):     6.64   0.325     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| CALIB             |
| STANDHYD ( 40420)|   Area    (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.95        46.62
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       1.90         1.90
     Length            (m)=     671.17        89.00
     Mannings n           =      0.015        0.240

     Max.Eff.Inten.(mm/hr)=      63.34        24.25
                over (min)       10.00        30.00
     Storage Coeff.  (min)=       8.64 (ii)  28.56 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.12         0.04
                                                    *TOTALS*
     PEAK FLOW       (cms)=       2.45         1.50          3.135 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42          6.08
     RUNOFF VOLUME    (mm)=      46.07        17.54         24.67
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.36          0.51

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40420):    67.57   3.135     6.08    24.67
     + ID2= 2 (******):     6.64   0.325     6.17    21.48
       ================================================
       ID = 3 (******):    74.21   3.448     6.08    24.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50410):   780.47  19.020     6.58    28.72
     + ID2= 2 (******):    74.21   3.448     6.08    24.38
       ================================================
       ID = 3 ( 50420):   854.68  20.872     6.58    28.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00        121.79        0.0450
                 12.00        116.08        0.0450
                 40.00        115.59    0.0450 /0.0350  Main Channel
                 44.00        114.89        0.0350      Main Channel
                 48.00        114.52        0.0350      Main Channel
                 52.00        115.72    0.0350 /0.0450  Main Channel
                 56.00        115.93        0.0450
                 60.00        117.24        0.0450
                 64.00        119.04        0.0450
                 68.00        120.69        0.0450
                 72.00        121.01        0.0450
                 74.00        121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.36   114.88    .645E+03        0.7         0.83      14.38
        0.71   115.23    .236E+04        4.6         1.41       8.47
        1.07   115.59    .489E+04       12.6         1.84       6.48
        1.44   115.96    .112E+05       30.9         1.97       6.04
        1.80   116.33    .227E+05       69.1         2.17       5.49
        2.17   116.70    .351E+05      125.6         2.56       4.65
        2.54   117.06    .479E+05      197.5         2.95       4.04
        2.91   117.43    .612E+05      283.9         3.32       3.59
        3.28   117.80    .749E+05      384.1         3.66       3.25
        3.65   118.17    .891E+05      497.4         3.99       2.99
        4.02   118.54    .104E+06      623.5         4.30       2.77
        4.39   118.91    .119E+06      762.2         4.59       2.60
        4.76   119.28    .134E+06      913.1         4.87       2.45
        5.13   119.65    .150E+06     1076.2         5.13       2.32
        5.49   120.02    .166E+06     1251.7         5.38       2.21
        5.86   120.39    .183E+06     1439.5         5.62       2.12
        6.23   120.75    .200E+06     1634.3         5.84       2.04
        6.60   121.12    .219E+06     1831.3         5.99       1.99
        6.97   121.49    .238E+06     2058.5         6.20       1.92

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420)  854.68    20.87    6.58  28.34      1.23      1.90
   OUTFLOW: ID= 1 ( 60420)  854.68    20.53    6.67  28.34      1.22      1.89
```

```
| CALIB             |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.41        11.03
     Dep. Storage     (mm)=       2.00         7.80
     Average Slope     (%)=       3.50         3.50
     Length            (m)=     465.00       102.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=      63.34        18.10
                over (min)        5.00        30.00
     Storage Coeff.  (min)=       5.77 (ii)  29.81 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.20         0.04
                                                    *TOTALS*
     PEAK FLOW       (cms)=       3.47         0.31          3.607 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42          6.00
     RUNOFF VOLUME    (mm)=      46.07        16.04         35.26
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.33          0.73

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40430):    32.43   3.607     6.00    35.26
     + ID2= 2 ( 60420):   854.68  20.528     6.67    28.34
       ================================================
       ID = 3 ( 50430):   887.11  21.041     6.67    28.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ROUTE CHN( 60430)|
```

```
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         116.29        0.0450
                   20.00         114.05        0.0450
                   25.00         110.83        0.0450
                   30.00         109.36        0.0450
                   35.00         108.23    0.0450 /0.0350  Main Channel
                   40.00         107.52        0.0350      Main Channel
                   45.00         108.00    0.0350 /0.0450  Main Channel
                   50.00         107.84        0.0450
                   55.00         108.21        0.0450
                   60.00         108.95        0.0450
                   65.00         109.35        0.0450
                   70.00         109.41        0.0450
                   75.00         109.48        0.0450
                   80.00         109.77        0.0450
                   85.00         112.20        0.0450
                   90.00         115.48        0.0450
                  100.00         116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24  107.76   .285E+03        0.4         0.74       12.74
        0.48  108.00   .146E+04        2.6         1.01        9.32
        0.97  108.49   .695E+04       23.3         1.90        4.97
        1.46  108.97   .141E+05       64.5         2.60        3.63
        1.94  109.46   .233E+05      116.9         2.84        3.33
        2.43  109.95   .371E+05      214.6         3.28        2.88
        2.92  110.44   .519E+05      350.2         3.83        2.47
        3.41  110.92   .675E+05      515.9         4.34        2.18
        3.89  111.41   .836E+05      711.3         4.82        1.96
        4.38  111.90   .100E+06      933.4         5.28        1.79
        4.87  112.39   .117E+06     1182.4         5.71        1.65
        5.35  112.87   .135E+06     1458.0         6.13        1.54
        5.84  113.36   .153E+06     1758.3         6.52        1.45
        6.33  113.85   .171E+06     2082.9         6.90        1.37
        6.82  114.34   .190E+06     2410.6         7.19        1.31
        7.30  114.82   .210E+06     2758.9         7.43        1.27
        7.79  115.31   .232E+06     3143.1         7.68        1.23
        8.28  115.80   .255E+06     3473.3         7.71        1.23
        8.77  116.29   .282E+06     3812.4         7.67        1.23

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  887.11    21.04    6.67  28.60      0.92      1.74
   OUTFLOW: ID= 1 ( 60430)  887.11    21.24    6.67  28.60      0.92      1.75



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70         19.42
     Dep. Storage     (mm)=       2.00          6.60
     Average Slope     (%)=       2.50          2.50
     Length            (m)=     617.06         45.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=      63.34         21.72
                   over (min)    10.00         25.00
     Storage Coeff.  (min)=       7.56 (ii)   21.83 (ii)
     Unit Hyd. Tpeak (min)=      10.00         25.00
     Unit Hyd. peak  (cms)=       0.13          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.59          0.54        5.872 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25         6.00
     RUNOFF VOLUME    (mm)=      46.07         13.76        34.76
     TOTAL RAINFALL   (mm)=      48.07         48.07        48.07
     RUNOFF COEFFICIENT   =       0.96          0.29         0.72


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40440):    57.11   5.872     6.00    34.76
     + ID2= 2 ( 60430):   887.11  21.236     6.67    28.60
       ================================================
       ID = 3 ( 50440):   944.23  22.237     6.58    28.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         104.01        0.0450
                   10.00         103.90        0.0450
                   20.00         103.74        0.0450
                   30.00         103.66        0.0450
                   40.00         103.60        0.0450
                   50.00         102.52        0.0450
                   60.00         101.16        0.0450
                   70.00         100.60        0.0450
                   80.00         100.17        0.0450
                   90.00          99.85        0.0450
                  100.00          97.89        0.0350      Main Channel
                  110.00          97.62        0.0350      Main Channel
                  120.00          99.12        0.0450
                  130.00          99.16        0.0450
                  140.00          99.36        0.0450
                  150.00          99.66        0.0450
                  160.00          99.68        0.0450
                  180.00          99.76        0.0450
                  190.00         104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27   97.89   .102E+04        1.2         0.77       13.74
        0.60   98.21   .381E+04        9.4         1.56        6.74
        0.92   98.53   .738E+04       24.3         2.08        5.05
        1.24   98.86   .117E+05       46.2         2.50        4.22
        1.56   99.18   .171E+05       76.6         2.84        3.71
        1.89   99.50   .264E+05      124.5         2.98        3.53
        2.21   99.82   .403E+05      189.1         2.96        3.56
        2.53  100.15   .597E+05      286.1         3.03        3.48
        2.85  100.47   .809E+05      417.7         3.26        3.23
        3.17  100.79   .104E+06      580.2         3.53        2.98
        3.50  101.11   .128E+06      771.7         3.81        2.77
        3.82  101.44   .153E+06      996.3         4.10        2.57
        4.14  101.76   .179E+06     1248.4         4.40        2.40
        4.46  102.08   .206E+06     1526.4         4.68        2.25
        4.79  102.40   .233E+06     1829.8         4.96        2.13
        5.11  102.73   .261E+06     2156.4         5.22        2.02
        5.43  103.05   .290E+06     2507.0         5.47        1.93
        5.75  103.37   .319E+06     2882.7         5.71        1.85
        6.08  103.69   .350E+06     3194.7         5.77        1.83

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  944.23    22.24    6.58  28.97      0.87      1.99
   OUTFLOW: ID= 1 ( 60440)  944.23    22.24    6.67  28.97      0.87      1.99



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37         17.02
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       0.80          0.80
     Length            (m)=     450.16        150.00
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=      63.34          9.62
                   over (min)    10.00         70.00
     Storage Coeff.  (min)=       8.81 (ii)   67.25 (ii)
     Unit Hyd. Tpeak (min)=      10.00         70.00
     Unit Hyd. peak  (cms)=       0.12          0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.80          0.25        1.838 (iii)
     TIME TO PEAK    (hrs)=       6.00          7.08         6.00
     RUNOFF VOLUME    (mm)=      46.07         15.18        27.85
     TOTAL RAINFALL   (mm)=      48.07         48.07        48.07
     RUNOFF COEFFICIENT   =       0.96          0.32         0.58


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40450):    30.40   1.838     6.00    27.85
     + ID2= 2 ( 60440):   944.23  22.238     6.67    28.97
       ================================================
       ID = 3 ( 50450):   974.62  22.658     6.67    28.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00          97.16        0.0450
                    3.00          96.00        0.0450
                    6.00          95.32        0.0450
                    9.00          94.64        0.0450
                   12.00          94.43        0.0450
                   15.00          94.29        0.0450
                   18.00          94.10        0.0350      Main Channel
                   21.00          94.02        0.0350      Main Channel
                   24.00          93.70        0.0350      Main Channel
                   27.00          94.22    0.0350 /0.0450  Main Channel
                   30.00          94.90        0.0450
                   32.00          95.30        0.0450
                   34.00          95.78        0.0450
                   36.00          96.25        0.0450
                   38.00          96.60        0.0450
                   48.00          97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.83   .942E+02        0.1         0.39       30.45
        0.27   93.96   .377E+03        0.3         0.62       19.18
        0.40   94.09   .911E+03        0.9         0.69       17.28
        0.59   94.29   .230E+04        3.4         1.06       11.15
        0.78   94.48   .428E+04        7.9         1.32        8.98
        0.97   94.67   .679E+04       14.6         1.53        7.74
        1.16   94.86   .963E+04       23.7         1.75        6.77
        1.35   95.05   .127E+05       34.9         1.96        6.07
        1.54   95.24   .160E+05       48.1         2.14        5.54
        1.73   95.43   .196E+05       63.6         2.31        5.13
        1.92   95.62   .233E+05       81.2         2.48        4.79
        2.11   95.81   .273E+05      101.0         2.63        4.51
        2.30   96.00   .315E+05      123.0         2.78        4.27
        2.49   96.19   .360E+05      147.8         2.93        4.06
        2.68   96.38   .406E+05      174.6         3.07        3.87
        2.87   96.57   .454E+05      203.7         3.20        3.71
        3.06   96.76   .505E+05      232.7         3.28        3.62
        3.25   96.95   .562E+05      264.9         3.36        3.54
        3.44   97.14   .624E+05      300.8         3.43        3.46

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450)  974.62    22.66    6.67  28.93      1.14      1.72
   OUTFLOW: ID= 1 ( 60450)  974.62    22.35    6.75  28.93      1.13      1.72



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--------------------
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36          7.04
     Dep. Storage     (mm)=       2.00          6.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     386.43         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      63.34         44.32
                   over (min)     5.00         20.00
     Storage Coeff.  (min)=       5.78 (ii)   15.69 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.20          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.98          0.45        2.286 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17         6.00
     RUNOFF VOLUME    (mm)=      46.07         17.64        32.66
     TOTAL RAINFALL   (mm)=      48.07         48.07        48.07
     RUNOFF COEFFICIENT   =       0.96          0.37         0.68


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40   2.286     6.00    32.66
     + ID2= 2 ( 60450):   974.62  22.348     6.75    28.93
       ================================================
       ID = 3 ( 50460):   997.02  22.649     6.75    29.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00          91.61        0.0450
```

```
                  3.00         91.57        0.0450
                  6.00         91.15        0.0450
                  9.00         90.70        0.0450
                 12.00         89.72        0.0450
                 15.00         88.86        0.0450
                 18.00         88.38    0.0450 /0.0350  Main Channel
                 21.00         87.96        0.0350      Main Channel
                 24.00         88.18    0.0350 /0.0450  Main Channel
                 26.00         88.19        0.0450
                 28.00         88.30        0.0450
                 30.00         90.32        0.0450
                 32.00         90.49        0.0450
                 34.00         90.80        0.0450
                 36.00         90.85        0.0450
                 38.00         90.97        0.0450
                 40.00         91.15        0.0450
                 42.00         91.29        0.0450
                 44.00         91.40        0.0450
                 46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)       (min)
        0.11    88.07    .589E+02        0.0         0.34       23.89
        0.21    88.18    .235E+03        0.3         0.54       15.05
        0.41    88.38    .106E+04        1.8         0.85        9.64
        0.61    88.57    .211E+04        5.3         1.22        6.69
        0.81    88.77    .330E+04       10.2         1.51        5.40
        1.01    88.97    .462E+04       16.6         1.76        4.63
        1.21    89.17    .603E+04       24.5         1.99        4.10
        1.41    89.37    .753E+04       33.8         2.19        3.72
        1.61    89.57    .912E+04       44.4         2.38        3.42
        1.81    89.77    .108E+05       56.4         2.56        3.19
        2.00    89.97    .125E+05       69.9         2.72        2.99
        2.20    90.17    .144E+05       84.7         2.88        2.83
        2.40    90.37    .163E+05       99.8         3.00        2.72
        2.60    90.56    .184E+05      114.7         3.04        2.68
        2.80    90.76    .208E+05      132.8         3.13        2.61
        3.00    90.96    .235E+05      148.4         3.09        2.64
        3.20    91.16    .266E+05      170.7         3.13        2.60
        3.40    91.36    .302E+05      194.9         3.16        2.58
        3.60    91.56    .342E+05      223.5         3.20        2.55

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460)  997.02    22.65    6.75  29.02      1.16      1.93
   OUTFLOW: ID= 1 ( 60460)  997.02    22.58    6.83  29.02      1.15      1.92


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       59.53         30.66
     Dep. Storage     (mm)=        2.00          5.90
     Average Slope     (%)=        1.40          1.40
     Length            (m)=      775.42         40.00
     Mannings n           =       0.015         0.280

     Max.Eff.Inten.(mm/hr)=       63.34         39.01
                   over (min)     10.00         25.00
     Storage Coeff.  (min)=       10.32 (ii)    22.57 (ii)
     Unit Hyd. Tpeak (min)=       10.00         25.00
     Unit Hyd. peak  (cms)=        0.11          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        6.66          1.52          7.516 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.25          6.00
     RUNOFF VOLUME    (mm)=       46.07         18.61         33.44
     TOTAL RAINFALL   (mm)=       48.07         48.07         48.07
     RUNOFF COEFFICIENT   =        0.96          0.39          0.70

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40470):    90.19   7.516     6.00    33.44
      + ID2= 2 ( 60460):   997.02  22.577     6.83    29.02
        ==========================================================
        ID = 3 ( 50470):  1087.22  24.058     6.75    29.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         89.19        0.0450
                   2.00         88.89        0.0450
                   4.00         88.54        0.0450
                   6.00         88.31        0.0450
                   8.00         88.14        0.0450
                  10.00         88.02        0.0450
                  12.00         87.99        0.0450
                  14.00         87.90        0.0450
                  16.00         87.84        0.0450
                  19.00         87.55        0.0450
                  22.00         86.85        0.0450
                  25.00         86.23        0.0350      Main Channel
                  28.00         86.23        0.0350      Main Channel
                  31.00         86.60        0.0450
                  34.00         87.49        0.0450
                  37.00         88.15        0.0450
                  41.00         88.21        0.0450
                  45.00         88.29        0.0450
                  48.00         88.36        0.0450
                  50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)       (min)
        0.01    86.23    .467E+01        0.0         0.03      307.39
        0.16    86.38    .381E+03        0.3         0.45       22.82
        0.31    86.54    .942E+03        1.0         0.65       15.77
        0.46    86.69    .167E+04        2.3         0.85       12.10
        0.61    86.84    .253E+04        4.2         1.03        9.95
        0.77    86.99    .350E+04        6.7         1.18        8.66
        0.92    87.15    .458E+04        9.8         1.32        7.78
        1.07    87.30    .576E+04       13.5         1.44        7.13
        1.22    87.45    .706E+04       17.7         1.54        6.63
        1.38    87.60    .847E+04       22.5         1.63        6.28
        1.53    87.76    .101E+05       27.8         1.69        6.05
        1.68    87.91    .119E+05       33.3         1.72        5.97
        1.83    88.06    .142E+05       39.8         1.72        5.96
        1.99    88.21    .170E+05       47.4         1.71        5.97
        2.14    88.36    .206E+05       57.3         1.71        5.99
        2.29    88.52    .247E+05       70.7         1.76        5.81
        2.44    88.67    .289E+05       86.1         1.83        5.59
        2.60    88.82    .332E+05      103.2         1.91        5.36
        2.75    88.97    .376E+05      121.7         1.99        5.15

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1087.22    24.06    6.75  29.38      1.42      1.65
   OUTFLOW: ID= 1 ( 60470) 1087.22    23.74    6.83  29.38      1.41      1.64


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--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       42.82         13.61
     Dep. Storage     (mm)=        2.00          5.80
     Average Slope     (%)=        1.90          1.90
     Length            (m)=      613.35         40.00
     Mannings n           =       0.015         0.260

     Max.Eff.Inten.(mm/hr)=       63.34         66.64
                   over (min)     10.00         20.00
     Storage Coeff.  (min)=        8.18 (ii)    16.81 (ii)
     Unit Hyd. Tpeak (min)=       10.00         20.00
     Unit Hyd. peak  (cms)=        0.13          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=        4.90          1.31          5.817 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=       46.07         23.60         36.85
     TOTAL RAINFALL   (mm)=       48.07         48.07         48.07
     RUNOFF COEFFICIENT   =        0.96          0.49          0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40480):    56.43   5.817     6.00    36.85
      + ID2= 2 ( 60470):  1087.22  23.744     6.83    29.38
        ==========================================================
        ID = 3 ( 50480):  1143.64  24.570     6.83    29.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         86.90        0.0450
                   2.00         86.76        0.0450
                   4.00         85.96        0.0450
                   6.00         85.44        0.0450
                   8.00         84.83        0.0450
                  10.00         84.50        0.0450
                  12.00         84.15        0.0450
                  14.00         83.85        0.0350      Main Channel
                  16.00         83.86        0.0350      Main Channel
                  18.00         83.99    0.0350 /0.0450  Main Channel
                  20.00         84.27        0.0450
                  22.00         84.55        0.0450
                  24.00         84.88        0.0450
                  26.00         85.37        0.0450
                  27.00         85.68        0.0450
                  28.00         85.91        0.0450
                  29.00         86.08        0.0450
                  30.00         86.21        0.0450
                  31.00         86.29        0.0450
                  34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)       (min)
        0.16    84.01    .165E+03        0.3         0.48       10.34
        0.32    84.17    .460E+03        1.2         0.77        6.41
        0.48    84.33    .855E+03        2.8         0.98        5.07
        0.64    84.48    .135E+04        5.2         1.14        4.35
        0.80    84.64    .193E+04        8.3         1.28        3.88
        0.95    84.80    .261E+04       12.3         1.40        3.53
        1.11    84.96    .337E+04       17.4         1.53        3.23
        1.27    85.12    .419E+04       23.5         1.66        2.97
        1.43    85.28    .506E+04       30.5         1.79        2.77
        1.59    85.44    .599E+04       38.5         1.90        2.60
        1.75    85.60    .697E+04       47.3         2.01        2.46
        1.91    85.76    .801E+04       57.1         2.12        2.34
        2.07    85.92    .911E+04       67.8         2.21        2.24
        2.23    86.07    .103E+05       79.5         2.30        2.15
        2.39    86.23    .115E+05       91.9         2.37        2.09
        2.54    86.39    .128E+05      105.7         2.45        2.02
        2.70    86.55    .142E+05      121.2         2.53        1.95
        2.86    86.71    .156E+05      138.0         2.62        1.89
        3.02    86.87    .171E+05      153.0         2.65        1.87

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1143.64    24.57    6.83  29.75      1.30      1.68
   OUTFLOW: ID= 1 ( 60480) 1143.64    24.51    6.92  29.75      1.29      1.68


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       12.60          4.16
     Dep. Storage     (mm)=        2.00          6.22
     Average Slope     (%)=        1.40          1.40
     Length            (m)=      334.28         53.00
     Mannings n           =       0.015         0.270

     Max.Eff.Inten.(mm/hr)=       63.34         56.03
                   over (min)      5.00         20.00
     Storage Coeff.  (min)=        6.23 (ii)    18.51 (ii)
     Unit Hyd. Tpeak (min)=        5.00         20.00
     Unit Hyd. peak  (cms)=        0.19          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.68          0.34          1.911 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=       46.07         22.46         36.72
     TOTAL RAINFALL   (mm)=       48.07         48.07         48.07
     RUNOFF COEFFICIENT   =        0.96          0.47          0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40490):    16.76   1.911     6.00    36.72
      + ID2= 2 ( 60480):  1143.64  24.514     6.92    29.75
        ==========================================================
        ID = 3 ( 50490):  1160.41  24.725     6.92    29.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
```

```
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         85.84        0.0450
                    6.00         84.32        0.0450
                   12.00         84.21        0.0450
                   18.00         84.12        0.0450
                   24.00         84.08        0.0450
                   30.00         84.10        0.0450
                   36.00         84.03        0.0450
                   42.00         83.92        0.0450
                   48.00         83.88        0.0450
                   54.00         82.88        0.0350      Main Channel
                   60.00         83.12    0.0350 /0.0450  Main Channel
                   64.00         83.65        0.0450
                   68.00         83.60        0.0450
                   72.00         83.67        0.0450
                   76.00         83.70        0.0450
                   80.00         83.82        0.0450
                   84.00         83.90        0.0450
                   88.00         84.05        0.0450
                   92.00         84.16        0.0450
                  100.00         85.83        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03        0.1         0.32      46.08
        0.31   83.19    .129E+04        0.8         0.57      26.14
        0.47   83.35    .259E+04        2.3         0.79      18.75
        0.62   83.50    .418E+04        4.5         0.96      15.43
        0.78   83.66    .626E+04        7.3         1.04      14.28
        0.93   83.81    .101E+05       11.9         1.05      14.10
        1.09   83.97    .153E+05       17.6         1.02      14.55
        1.24   84.13    .231E+05       26.2         1.00      14.73
        1.40   84.28    .341E+05       41.2         1.07      13.79
        1.55   84.44    .460E+05       61.7         1.19      12.44
        1.71   84.59    .582E+05       86.6         1.32      11.21
        1.86   84.75    .706E+05      115.2         1.45      10.21
        2.02   84.90    .831E+05      147.5         1.57       9.39
        2.17   85.06    .959E+05      183.2         1.70       8.72
        2.33   85.21    .109E+06      222.2         1.81       8.16
        2.48   85.37    .122E+06      264.5         1.93       7.68
        2.64   85.52    .135E+06      310.0         2.03       7.27
        2.79   85.68    .149E+06      358.5         2.14       6.91
        2.95   85.83    .162E+06      410.1         2.24       6.60

                                          <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1160.41    24.72    6.92  29.85      1.22      1.01
   OUTFLOW: ID= 1 ( 60490) 1160.41    23.63    7.08  29.85      1.19      1.01



--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92         4.72
     Dep. Storage     (mm)=       2.00         5.43
     Average Slope     (%)=       2.10         2.10
     Length            (m)=     370.92        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=      63.34        66.27
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       5.87 (ii)   14.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.19         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.11         0.51      2.548 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08       6.00
     RUNOFF VOLUME    (mm)=      46.07        23.61      37.36
     TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
     RUNOFF COEFFICIENT   =       0.96         0.49       0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40810):    20.64   2.548     6.00    37.36
     + ID2= 2 ( 60490):  1160.41  23.630     7.08    29.85
       ================================================
       ID = 3 ( 50810):  1181.04  23.823     7.08    29.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      63.34        25.38
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.08 (ii)   18.38 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.24      0.435 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25       6.00
     RUNOFF VOLUME    (mm)=      46.07        14.45      19.98
     TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
     RUNOFF COEFFICIENT   =       0.96         0.30       0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40500):     9.32   0.435     6.00    19.98
     + ID2= 2 ( 50810):  1181.04  23.823     7.08    29.98
       ================================================
       ID = 3 ( 50500):  1190.37  23.902     7.08    29.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.055 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89         0.04
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=     115.50         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      63.34        36.19
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       4.40 (ii)    4.40 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.23         0.23
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.67         0.00      0.674 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00       6.00
     RUNOFF VOLUME    (mm)=      46.07        21.49      45.82
     TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
     RUNOFF COEFFICIENT   =       0.96         0.45       0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      63.34        36.19
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.61 (ii)    2.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.29         0.29
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.00      0.079 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00       6.00
     RUNOFF VOLUME    (mm)=      46.07        21.49      45.82
     TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
     RUNOFF COEFFICIENT   =       0.96         0.45       0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25        13.25
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     420.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      63.34        60.59
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       5.89 (ii)    8.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.19         0.13
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.33         1.73      3.059 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00       6.00
     RUNOFF VOLUME    (mm)=      46.07        26.19      32.15
     TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
     RUNOFF COEFFICIENT   =       0.96         0.54       0.67

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    1.8600      0.9862
                           0.0560      0.3250   |    2.1000      1.0580
                           0.2600      0.4718   |    2.2000      1.2000
                           0.7400      0.6512   |   10.0000      1.2500
                           1.4100      0.8427   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.500     3.059     6.00       32.15
   OUTFLOW: ID= 1 (******)     26.500     0.409     6.67       32.10
   OVERFLOW:ID= 3 (  0003)      0.000     0.000     0.00        0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.38
                    TIME SHIFT OF PEAK FLOW          (min)= 40.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.5284

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  --------------------------
  | Junction Command(30651006) |
  --------------------------

                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651003)    0.00     0.00    0.00      0.00
  OUTFLOW: ID= 2(30651006)    0.00     0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
       ID1= 1 (******):    26.50   0.409     6.67    32.10
```

```
12547>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
12548>         ================================================
12549>         ID = 3 (******):    26.50   0.409     6.67    32.10
12550>
12551>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12552> ---------------------------------------------------------------------------
12553>
12554> --------------------
12555> | ADD HYD  (******)|
12556> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
12557> --------------------         (ha)    (cms)    (hrs)     (mm)
12558>         ID1= 3 (******):    26.50   0.409     6.67    32.10
12559>       + ID2= 2 (******):     0.93   0.055     6.08    21.47
12560>         ================================================
12561>         ID = 1 (******):    27.43   0.429     6.58    31.74
12562>
12563>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12564> ---------------------------------------------------------------------------
12565>
12566> --------------------
12567> | ADD HYD  (******)|
12568> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12569> --------------------         (ha)    (cms)    (hrs)     (mm)
12570>         ID1= 1 (******):    27.43   0.429     6.58    31.74
12571>       + ID2= 2 (******):     3.93   0.674     6.00    45.82
12572>         ================================================
12573>         ID = 3 (******):    31.36   0.792     6.00    33.50
12574>
12575>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12576> ---------------------------------------------------------------------------
12577>
12578> --------------------
12579> | ADD HYD  (******)|
12580> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
12581> --------------------         (ha)    (cms)    (hrs)     (mm)
12582>         ID1= 3 (******):    31.36   0.792     6.00    33.50
12583>       + ID2= 2 (******):     0.45   0.079     6.00    45.82
12584>         ================================================
12585>         ID = 1 (******):    31.81   0.871     6.00    33.68
12586>
12587>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12588> ---------------------------------------------------------------------------
12589> --------------------
12590> | CALIB            |
12591> | NASHYD   (******)|   Area     (ha)=  14.62   Curve Number    (CN)= 85.0
12592> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
12593> --------------------   U.H. Tp(hrs)=   0.45
12594>
12595>      Unit Hyd Qpeak  (cms)=   1.241
12596>
12597>      PEAK FLOW       (cms)=   0.536 (i)
12598>      TIME TO PEAK    (hrs)=   6.333
12599>      RUNOFF VOLUME    (mm)=  21.490
12600>      TOTAL RAINFALL   (mm)=  48.071
12601>      RUNOFF COEFFICIENT   =   0.447
12602>
12603>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12604>
12605> ---------------------------------------------------------------------------
12606>
12607> --------------------
12608> | ADD HYD  (******)|
12609> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12610> --------------------         (ha)    (cms)    (hrs)     (mm)
12611>         ID1= 1 (******):    14.62   0.536     6.33    21.49
12612>       + ID2= 2 (******):    31.81   0.871     6.00    33.68
12613>         ================================================
12614>         ID = 3 (******):    46.43   1.171     6.00    29.84
12615>
12616>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12617> ---------------------------------------------------------------------------
12618> --------------------
12619> | ROUTE CHN(******)|
12620> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
12621> --------------------
12622>                <------ DATA FOR SECTION (   1.1) ------>
12623>                Distance      Elevation       Manning
12624>                    0.00        443.75        0.0450
12625>                    8.50        443.74        0.0450
12626>                   35.47        443.64        0.0450
12627>                   64.60        443.29        0.0450
12628>                   74.71        443.18        0.0450
12629>                   80.25        443.17        0.0450
12630>                  112.17        443.12    0.0450 /0.0350  Main Channel
12631>                  131.57        442.76        0.0350      Main Channel
12632>                  137.50        442.66        0.0350      Main Channel
12633>                  137.91        442.67        0.0350      Main Channel
12634>                  152.28        442.24        0.0350      Main Channel
12635>                  167.40        441.39        0.0350      Main Channel
12636>                  178.29        441.56        0.0350      Main Channel
12637>                  216.75        442.01        0.0350      Main Channel
12638>                  221.54        442.05    0.0350 /0.0450  Main Channel
12639>                  334.66        442.50        0.0450
12640>
12641>       <---------------------- TRAVEL TIME TABLE ---------------------->
12642>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
12643>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
12644>         0.05   441.45    .114E+03        0.0         0.27       55.89
12645>         0.11   441.50    .457E+03        0.2         0.43       35.21
12646>         0.16   441.56    .103E+04        0.6         0.57       26.87
12647>         0.22   441.61    .185E+04        1.4         0.67       22.84
12648>         0.27   441.67    .297E+04        2.5         0.77       19.84
12649>         0.33   441.72    .437E+04        4.1         0.87       17.59
12650>         0.38   441.78    .605E+04        6.4         0.96       15.85
12651>         0.44   441.83    .802E+04        9.2         1.05       14.47
12652>         0.49   441.89    .103E+05       12.8         1.14       13.35
12653>         0.55   441.94    .128E+05       17.2         1.23       12.42
12654>         0.60   442.00    .157E+05       22.4         1.31       11.63
12655>         0.66   442.05    .188E+05       28.3         1.38       11.07
12656>         0.71   442.11    .225E+05       36.9         1.50       10.16
12657>         0.78   442.17    .277E+05       48.4         1.60        9.54
12658>         0.84   442.24    .339E+05       61.9         1.67        9.13
12659>         0.91   442.30    .412E+05       77.1         1.71        8.90
12660>         0.97   442.36    .495E+05       94.7         1.75        8.71
12661>         1.03   442.43    .589E+05      114.9         1.79        8.54
12662>         1.10   442.49    .693E+05      137.9         1.82        8.38
12663>
12664>                                    <---- hydrograph ---->   <-pipe / channel->
12665>                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
12666>                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
12667>    INFLOW : ID= 2 (******)    46.43     1.17     6.00   29.84      0.21       0.64
12668>    OUTFLOW: ID= 1 (******)    46.43     0.91     6.58   29.84      0.19       0.60
12669>
12670>
12671>
12672> ---------------------------------------------------------------------------
12673> --------------------
12674> | DIVERTHYD(******)|
12675> | IN= 1   # OUT= 5 |
12676> --------------------
12677>      Outflow / Inflow  Relationships
12678>
12679>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
12680>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
12681>        0.00     0.00     0.00     0.00     0.00     0.00
12682>        0.92     0.00     0.00     0.00     0.00     0.92
12683>        1.00     0.73     0.00     0.00     0.00     1.73
12684>        1.00     1.11     0.00     0.00     0.00     2.11
12685>        1.00     1.60     0.00     0.00     0.00     2.60
12686>        1.00     2.08     0.00     0.00     0.00     3.08
12687>        1.00     2.63     0.00     0.00     0.00     3.63
12688>        1.00     4.53     0.00     0.00     0.00     5.53
12689>
12690>                              AREA     QPEAK     TPEAK     R.V.
12691>                              (ha)     (cms)     (hrs)     (mm)
12692>      TOTAL HYD.(ID= 1):     46.43      0.91      6.58    29.84
12693>      ================================================
12694>      ID= 2  (   2)    :    46.43      0.91      6.58    29.84
12695>      ID= 3  (   2)    :     0.00      0.00      0.00     0.00
12696>      ID= 4  (   2)    :     0.00      0.00      0.00     0.00
12697>      ID= 5  (   2)    :     0.00      0.00      0.00     0.00
12698>      ID= 6  (   2)    :     0.00      0.00      0.00     0.00
12699> ---------------------------------------------------------------------------
12700> --------------------
12701> | ROUTE CHN(******)|
12702> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
12703> --------------------
12704>                <------ DATA FOR SECTION (   1.1) ------>
12705>                Distance      Elevation       Manning
12706>                    0.00        443.75        0.0000
12707>                    8.50        443.74        0.0450
12708>                   35.47        443.64        0.0450
12709>                   64.60        443.29        0.0450
12710>                   74.71        443.18        0.0450
12711>                   80.25        443.17        0.0450
12712>                  112.17        443.12    0.0450 /0.0350  Main Channel
12713>                  131.57        442.76        0.0350      Main Channel
12714>                  137.50        442.66        0.0350      Main Channel
12715>                  137.91        442.67        0.0350      Main Channel
12716>                  152.28        442.24        0.0350      Main Channel
12717>                  167.40        441.39        0.0350      Main Channel
12718>                  178.29        441.56        0.0350      Main Channel
12719>                  216.75        442.01        0.0350      Main Channel
12720>                  221.54        442.05    0.0350 /0.0450  Main Channel
12721>                  334.66        442.50        0.0450
12722>
12723>       <---------------------- TRAVEL TIME TABLE ---------------------->
12724>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
12725>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
12726>         0.05   441.45    .128E+03        0.0         0.29       60.12
12727>         0.11   441.50    .514E+03        0.2         0.45       37.87
12728>         0.16   441.56    .116E+04        0.7         0.59       28.90
12729>         0.22   441.61    .208E+04        1.4         0.70       24.57
12730>         0.27   441.67    .333E+04        2.6         0.80       21.34
12731>         0.33   441.72    .490E+04        4.3         0.91       18.92
12732>         0.38   441.78    .680E+04        6.6         1.01       17.05
12733>         0.44   441.83    .901E+04        9.6         1.10       15.57
12734>         0.49   441.89    .115E+05       13.4         1.19       14.36
12735>         0.55   441.94    .144E+05       18.0         1.28       13.36
12736>         0.60   442.00    .176E+05       23.4         1.37       12.51
12737>         0.66   442.05    .211E+05       29.5         1.44       11.91
12738>         0.71   442.11    .253E+05       38.5         1.57       10.93
12739>         0.78   442.17    .311E+05       50.5         1.67       10.26
12740>         0.84   442.24    .381E+05       64.7         1.74        9.82
12741>         0.91   442.30    .463E+05       80.5         1.79        9.57
12742>         0.97   442.36    .556E+05       98.9         1.83        9.37
12743>         1.03   442.43    .661E+05      120.0         1.86        9.19
12744>         1.10   442.49    .779E+05      144.1         1.90        9.01
12745>
12746>                                    <---- hydrograph ---->   <-pipe / channel->
12747>                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
12748>                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
12749>    INFLOW : ID= 2 (******)    46.43     0.91     6.58   29.84      0.18       0.62
12750>    OUTFLOW: ID= 1 (******)    46.43     0.79     7.08   29.83      0.17       0.61
12751>
12752>
12753>
12754> ---------------------------------------------------------------------------
12755> --------------------
12756> | CALIB            |
12757> | NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
12758> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
12759> --------------------   U.H. Tp(hrs)=   0.46
12760>
12761>      Unit Hyd Qpeak  (cms)=   0.352
12762>
12763>      PEAK FLOW       (cms)=   0.153 (i)
12764>      TIME TO PEAK    (hrs)=   6.333
12765>      RUNOFF VOLUME    (mm)=  21.490
12766>      TOTAL RAINFALL   (mm)=  48.071
12767>      RUNOFF COEFFICIENT   =   0.447
12768>
12769>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12770>
12771> ---------------------------------------------------------------------------
12772>
12773> --------------------
12774> | ADD HYD  (******)|
12775> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12776> --------------------         (ha)    (cms)    (hrs)     (mm)
12777>         ID1= 1 (******):     4.24   0.153     6.33    21.49
12778>       + ID2= 2 (******):    46.43   0.793     7.08    29.83
12779>         ================================================
12780>         ID = 3 (******):    50.67   0.876     6.92    29.14
12781>
12782>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12783> ---------------------------------------------------------------------------
12784> --------------------
12785> | CALIB            |
12786> | NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
12787> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
12788> --------------------   U.H. Tp(hrs)=   0.29
12789>
12790>      Unit Hyd Qpeak  (cms)=   0.341
12791>
12792>      PEAK FLOW       (cms)=   0.130 (i)
12793>      TIME TO PEAK    (hrs)=   6.167
12794>      RUNOFF VOLUME    (mm)=  21.482
12795>      TOTAL RAINFALL   (mm)=  48.071
12796>      RUNOFF COEFFICIENT   =   0.447
12797>
12798>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12799>
12800> ---------------------------------------------------------------------------
12801>
12802> --------------------
12803> | ADD HYD  (******)|
12804> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
12805> --------------------         (ha)    (cms)    (hrs)     (mm)
12806>         ID1= 1 (******):     2.59   0.130     6.17    21.48
12807>       + ID2= 2 (******):    50.67   0.876     6.92    29.14
12808>         ================================================
12809>         ID = 3 (******):    53.26   0.910     6.83    28.76
12810>
12811>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12812> ---------------------------------------------------------------------------
12813> --------------------
12814> | ROUTE CHN(******)|
12815> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
12816> --------------------
12817>                <------ DATA FOR SECTION (   1.1) ------>
12818>                Distance      Elevation       Manning
12819>                    0.00        429.12        0.0500
12820>                   37.54        428.86        0.0500
12821>                   53.31        428.70        0.0500
12822>                   81.17        428.24        0.0500
12823>                   99.28        428.15    0.0500 /0.0300  Main Channel
12824>                  114.53        427.72        0.0300      Main Channel
12825>                  119.88        426.51        0.0300      Main Channel
12826>                  124.17        425.84        0.0300      Main Channel
12827>                  206.01        425.90        0.0300      Main Channel
12828>                  209.64        426.51        0.0300      Main Channel
12829>                  214.21        426.89        0.0300      Main Channel
12830>                  231.49        427.17        0.0300      Main Channel
12831>                  268.61        427.89    0.0300 /0.0500  Main Channel
12832>                  351.58        428.15        0.0500
12833>                  368.27        428.31        0.0500
12834>                  405.75        428.52        0.0500
12835>                  416.79        428.59        0.0500
12836>                  440.06        428.76        0.0500
12837>                  469.88        428.97        0.0500
12838>
12839>       <---------------------- TRAVEL TIME TABLE ---------------------->
12840>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
12841>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
12842>         0.16   426.00    .187E+04        9.2         0.88       3.40
12843>         0.31   426.16    .424E+04       35.4         1.49       2.00
12844>         0.47   426.32    .666E+04       74.1         1.98       1.50
12845>         0.63   426.47    .914E+04      123.7         2.41       1.23
12846>         0.79   426.63    .117E+05      182.8         2.79       1.07
12847>         0.94   426.79    .143E+05      251.2         3.13       0.95
12848>         1.10   426.95    .170E+05      323.1         3.39       0.88
12849>         1.26   427.10    .199E+05      394.0         3.52       0.84
12850>         1.42   427.26    .232E+05      479.1         3.69       0.81
12851>         1.57   427.42    .267E+05      577.3         3.86       0.77
12852>         1.73   427.58    .304E+05      687.4         4.03       0.74
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       1.89   427.73    .344E+05     808.6          4.20       0.71
       2.05   427.89    .387E+05     927.4          4.28       0.70
       2.23   428.07    .449E+05    1119.2          4.45       0.67
       2.41   428.25    .531E+05    1356.2          4.56       0.65
       2.59   428.43    .627E+05    1638.9          4.66       0.64
       2.77   428.61    .737E+05    1955.8          4.73       0.63
       2.95   428.79    .859E+05    2310.2          4.79       0.62
       3.13   428.97    .996E+05    2701.5          4.84       0.61

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)   53.26     0.91    6.83  28.76      0.02      0.88
   OUTFLOW: ID= 1 (******)   53.26     0.91    6.92  28.76      0.02      0.88


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.029 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.440
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  11.13   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.42

     Unit Hyd Qpeak  (cms)=   1.012

     PEAK FLOW       (cms)=   0.427 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  21.489
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.045 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.463
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area     (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      54.14         24.23
     Dep. Storage     (mm)=       2.00          5.78
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     722.82         47.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=      63.34         46.61
                   over (min)      10.00         25.00
     Storage Coeff.  (min)=      10.37 (ii)    22.96 (ii)
     Unit Hyd. Tpeak (min)=      10.00         25.00
     Unit Hyd. peak  (cms)=       0.11          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       6.02          1.43          6.841 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25           6.00
     RUNOFF VOLUME    (mm)=      46.07         21.11          35.15
     TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
     RUNOFF COEFFICIENT   =       0.96          0.44           0.73


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         144.07        0.0450
                  9.00         143.84        0.0450
                 12.00         142.90        0.0450
                 15.00         142.48        0.0450
                 18.00         142.43    0.0450 /0.0350  Main Channel
                 21.00         142.31        0.0350      Main Channel
                 24.00         142.12        0.0350      Main Channel
                 27.00         142.44    0.0350 /0.0450  Main Channel
                 30.00         142.71        0.0450
                 33.00         143.18        0.0450
                 36.00         143.27        0.0450
                 37.00         143.36        0.0450
                 38.00         143.64        0.0450
                 39.00         143.92        0.0450
                 40.00         143.93        0.0450
                 45.00         144.18        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.08   142.20    .282E+02       0.0          0.24      26.26
       0.16   142.27    .113E+03       0.1          0.38      16.54
       0.23   142.35    .257E+03       0.3          0.48      13.09
       0.31   142.43    .477E+03       0.7          0.57      11.02
       0.42   142.54    .969E+03       2.0          0.76       8.24
       0.53   142.65    .157E+04       3.8          0.92       6.80
       0.64   142.76    .224E+04       6.3          1.06       5.90
       0.75   142.87    .299E+04       9.5          1.19       5.26
       0.86   142.98    .379E+04      13.2          1.31       4.77
       0.97   143.09    .463E+04      17.6          1.43       4.37
       1.08   143.20    .552E+04      22.5          1.53       4.09
       1.19   143.31    .653E+04      27.9          1.60       3.90
       1.30   143.42    .761E+04      34.4          1.70       3.69
       1.41   143.53    .874E+04      41.7          1.79       3.49
       1.52   143.64    .989E+04      49.7          1.89       3.32
       1.63   143.75    .111E+05      58.3          1.98       3.17
       1.74   143.85    .123E+05      66.9          2.04       3.06
       1.85   143.96    .137E+05      73.2          2.01       3.11
       1.96   144.07    .153E+05      81.5          2.00       3.13

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (40600)    78.37     6.84    6.00  35.15      0.66      1.08
   OUTFLOW: ID= 1 (60600)    78.37     6.42    6.08  35.15      0.64      1.06


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| CALIB            |
| STANDHYD ( 40610)|   Area     (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75          2.18
     Dep. Storage     (mm)=       2.00          8.00
     Average Slope     (%)=       2.90          2.90
     Length            (m)=     162.03         40.00
     Mannings n           =      0.015         0.340

     Max.Eff.Inten.(mm/hr)=      63.34         32.10
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       3.24 (ii)    15.20 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.27          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.22          0.11          0.291 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      46.07         16.69          25.98
     TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
     RUNOFF COEFFICIENT   =       0.96          0.35           0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40610):     3.94    0.291     6.00    25.98
      + ID2= 2 ( 60600):    78.37    6.424     6.08    35.15
        ================================================
        ID = 3 ( 50600):    82.31    6.592     6.08    34.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         143.40        0.0450
                  2.00         142.92        0.0450
                  4.00         142.14        0.0450
                  6.00         141.49        0.0450
                  8.00         141.11        0.0450
                 10.00         141.00    0.0450 /0.0350  Main Channel
                 12.00         140.98        0.0350      Main Channel
                 14.00         140.82        0.0350      Main Channel
                 16.00         141.02    0.0350 /0.0450  Main Channel
                 18.00         141.19        0.0450
                 20.00         141.19        0.0450
                 22.00         141.44        0.0450
                 24.00         142.00        0.0450
                 26.00         142.20        0.0450
                 28.00         142.39        0.0450
                 30.00         142.96        0.0450
                 31.00         143.13        0.0450
                 32.00         143.28        0.0450
                 33.00         143.41        0.0450
                 34.00         143.44        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   140.91    .314E+02       0.0          0.24      23.12
       0.18   141.00    .132E+03       0.1          0.31      17.83
       0.33   141.14    .502E+03       0.9          0.58       9.54
       0.47   141.29    .107E+04       2.4          0.74       7.47
       0.61   141.43    .175E+04       4.7          0.89       6.20
       0.75   141.57    .251E+04       7.9          1.05       5.31
       0.89   141.71    .332E+04      11.8          1.19       4.68
       1.03   141.85    .416E+04      16.5          1.32       4.21
       1.17   141.99    .506E+04      21.8          1.44       3.86
       1.31   142.13    .601E+04      27.5          1.52       3.64
       1.45   142.27    .705E+04      34.0          1.61       3.46
       1.59   142.41    .818E+04      41.5          1.69       3.29
       1.73   142.55    .936E+04      50.2          1.79       3.11
       1.88   142.69    .106E+05      59.8          1.88       2.95
       2.02   142.84    .118E+05      70.2          1.97       2.81
       2.16   142.98    .132E+05      81.2          2.06       2.70
       2.30   143.12    .145E+05      92.6          2.12       2.61
       2.44   143.26    .159E+05     104.8          2.19       2.54
       2.58   143.40    .174E+05     117.7          2.24       2.47

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50600)   82.31     6.59    6.08  34.71      0.69      0.98
   OUTFLOW: ID= 1 ( 60610)   82.31     6.17    6.17  34.71      0.67      0.96


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| CALIB            |
| STANDHYD ( 40620)|   Area     (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30          1.37
     Dep. Storage     (mm)=       2.00          5.59
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     194.41         43.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=      63.34         58.75
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       4.41 (ii)    14.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.23          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.59          0.14          0.709 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      46.07         23.13          37.04
     TOTAL RAINFALL   (mm)=      48.07         48.07          48.07
     RUNOFF COEFFICIENT   =       0.96          0.48           0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40620):     5.67    0.709     6.00    37.04
      + ID2= 2 ( 60610):    82.31    6.172     6.17    34.71
        ================================================
        ID = 3 ( 50610):    87.98    6.440     6.17    34.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         142.03        0.0450
                   1.00         141.71        0.0450
                   2.00         141.35        0.0450
                   3.00         141.01        0.0450
                   4.00         140.79        0.0450
                   5.00         140.56        0.0450
                   6.00         140.44        0.0450
                   7.00         140.30    0.0450 /0.0350  Main Channel
                   8.00         140.08        0.0350      Main Channel
                   9.00         139.88        0.0350      Main Channel
                  10.00         139.97        0.0350      Main Channel
                  11.00         140.12        0.0350      Main Channel
                  12.00         140.35    0.0350 /0.0450  Main Channel
                  13.00         140.52        0.0450
                  14.00         140.73        0.0450
                  15.00         140.97        0.0450
                  16.00         141.27        0.0450
                  17.00         141.57        0.0450
                  18.00         141.89        0.0450
                  19.00         142.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02       0.0          0.36       8.21
        0.21   140.09    .579E+02       0.2          0.59       5.04
        0.31   140.19    .120E+03       0.5          0.78       3.79
        0.42   140.30    .200E+03       1.1          0.95       3.12
        0.53   140.41    .313E+03       2.1          1.18       2.51
        0.65   140.53    .456E+03       3.5          1.36       2.18
        0.76   140.65    .630E+03       5.3          1.50       1.98
        0.88   140.76    .826E+03       7.6          1.63       1.82
        0.99   140.88    .104E+04      10.3          1.75       1.69
        1.11   140.99    .128E+04      13.4          1.87       1.59
        1.23   141.11    .154E+04      17.1          1.98       1.50
        1.34   141.22    .180E+04      21.2          2.09       1.42
        1.46   141.34    .209E+04      25.8          2.20       1.35
        1.57   141.45    .239E+04      30.9          2.30       1.29
        1.69   141.57    .270E+04      36.4          2.40       1.24
        1.80   141.69    .303E+04      42.4          2.49       1.19
        1.92   141.80    .337E+04      48.9          2.58       1.15
        2.04   141.92    .373E+04      55.9          2.67       1.11
        2.15   142.03    .411E+04      63.2          2.74       1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98     6.44    6.17  34.86      0.82      1.56
   OUTFLOW: ID= 1 ( 60620)   87.98     6.38    6.17  34.86      0.82      1.56


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      63.34        31.84
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       3.17 (ii)   18.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.27         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.06          0.155 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      46.07        17.11         26.26
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.36          0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40640):     2.13   0.155     6.00    26.26
      + ID2= 2 ( 60620):    87.98   6.379     6.17    34.86
        ================================================
        ID = 3 ( 50630):    90.11   6.456     6.17    34.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        41.61
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       6.62 (ii)   18.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.77         0.45          2.075 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      46.07        20.28         33.86
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.42          0.70

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40630):    20.54   2.075     6.00    33.86
      + ID2= 2 ( 50630):    90.11   6.456     6.17    34.66
        ================================================
        ID = 3 ( 50640):   110.65   7.496     6.17    34.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    3.4010      4.4390
                         0.0530      0.4910   |    4.8380      5.5060
                         0.0890      0.7040   |    5.8470      5.5380
                         0.2040      1.0890   |    6.5980      5.9190
                         0.3240      1.4800   |    7.2560      6.2250
                         0.3890      1.7490   |    7.9030      6.4820
                         0.4470      1.9970   |    8.4910      6.6820
                         0.5090      2.3490   |   12.0680      7.1150
                         0.7420      2.9150   |   20.0000      7.2000
                         1.7580      3.6690   |    0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                     (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50640)    110.646      7.496      6.17      34.51
   OUTFLOW: ID= 1 (******)    110.646      0.659      8.42      34.48
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.79
                  TIME SHIFT OF PEAK FLOW          (min)=135.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  2.7136

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  --------------------------
  | Junction Command(30651005) |
  --------------------------

                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651001)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2(30651005)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):   110.65   0.659     8.42    34.48
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):   110.65   0.659     8.42    34.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):   110.65   0.659     8.42    34.48
      + ID2= 2 (******):     0.75   0.045     6.08    21.46
        ================================================
        ID = 1 (******):   111.40   0.662     8.33    34.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   0.427     6.33    21.49
      + ID2= 2 (******):   111.40   0.662     8.33    34.39
        ================================================
        ID = 3 (******):   122.53   0.863     6.42    33.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         447.10        0.0450
                  42.83         446.80        0.0450
                  42.89         446.80        0.0450
                  43.24         446.79        0.0450
                 122.57         446.48        0.0450
                 154.02         446.22        0.0450
                 191.79         446.32    0.0450 /0.0350  Main Channel
                 199.05         442.27        0.0350      Main Channel
                 199.74         442.33        0.0350      Main Channel
                 212.02         444.19        0.0350      Main Channel
                 232.17         444.54    0.0350 /0.0450  Main Channel
                 348.58         444.42        0.0450
                 359.23         444.30        0.0450
                 381.33         444.03        0.0450
                 483.65         444.18        0.0450
                 548.64         445.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.19   442.46    .184E+03       0.1          0.65      24.29
        0.38   442.65    .662E+03       0.7          1.01      15.64
        0.57   442.84    .143E+04       2.0          1.31      12.09
        0.76   443.03    .247E+04       4.1          1.57      10.05
        0.95   443.22    .381E+04       7.3          1.81       8.70
        1.14   443.41    .543E+04      11.7          2.04       7.73
        1.33   443.60    .733E+04      17.5          2.26       6.99
        1.52   443.79    .952E+04      24.8          2.46       6.41
        1.71   443.98    .120E+05      33.7          2.66       5.93
        1.89   444.16    .211E+05      47.0          2.11       7.49
        2.08   444.35    .469E+05      73.0          1.47      10.71
        2.27   444.54    .855E+05     117.6          1.30      12.12
        2.46   444.73    .140E+06     240.0          1.62       9.75
        2.65   444.92    .197E+06     400.4          1.92       8.20
        2.84   445.11    .255E+06     595.0          2.21       7.13
        3.03   445.30    .314E+06     821.8          2.48       6.37
        3.22   445.49    .374E+06    1079.2          2.73       5.78
        3.41   445.68    .436E+06    1366.3          2.96       5.32
        3.60   445.87    .500E+06    1682.3          3.19       4.95

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   122.53     0.86    6.42  33.22      0.40      1.04
   OUTFLOW: ID= 1 (******)   122.53     0.81    6.75  33.22      0.39      1.03


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.174

     PEAK FLOW       (cms)=   0.062 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.10   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.175
```

```
      PEAK FLOW       (cms)=   0.063 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  21.471
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.447

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.99
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.50         1.50
      Dep. Storage     (mm)=       2.00         4.13
      Average Slope     (%)=       1.00        20.00
      Length            (m)=      15.00        15.00
      Mannings n           =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=      63.34       100.46
                    over (min)        5.00         5.00
      Storage Coeff.  (min)=       0.98 (ii)    3.81 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.25
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.01         0.42          0.420 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      46.07        31.62          31.77
      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
      RUNOFF COEFFICIENT   =       0.96         0.66           0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  17.55
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      14.39         3.16
      Dep. Storage     (mm)=       2.00         4.13
      Average Slope     (%)=       1.00         2.00
      Length            (m)=      30.00        30.00
      Mannings n           =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=      63.34       186.25
                    over (min)        5.00         5.00
      Storage Coeff.  (min)=       1.49 (ii)    2.78 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.33         0.28
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.27         1.64          2.911 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      46.07        36.87          40.64
      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
      RUNOFF COEFFICIENT   =       0.96         0.77           0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.05   0.062     6.08    21.47
      + ID2= 2 (******):     1.10   0.063     6.08    21.47
        ================================================
        ID = 3 (******):     2.15   0.124     6.08    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.15   0.124     6.08    21.47
      + ID2= 2 (******):    17.55   2.911     6.00    40.64
        ================================================
        ID = 1 (******):    19.70   3.018     6.00    38.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    19.70   3.018     6.00    38.55
      + ID2= 2 (******):     2.99   0.420     6.00    31.77
        ================================================
        ID = 3 (******):    22.69   3.439     6.00    37.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    22.69   3.439     6.00    37.66
      + ID2= 2 (******):     0.21   0.103     6.00    38.12
        ================================================
        ID = 1 (******):    22.90   3.542     6.00    37.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    22.90   3.542     6.00    37.66
      + ID2= 2 (******):     0.45   0.229     6.00    40.64
        ================================================
        ID = 3 (******):    23.35   3.771     6.00    37.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.3352      3.1110
                          0.0933      0.5687   |    0.3714      3.8158
                          0.1848      1.1636   |    0.4043      4.5492
                          0.2439      1.7854   |    0.4445      5.5626
                          0.2910      2.4344   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)    23.346     3.771      6.00      37.72
   OUTFLOW: ID= 1 (******)    23.346     0.109      8.08      37.65

   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.90
                  TIME SHIFT OF PEAK FLOW         (min)=125.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6733

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30651004) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH    0003 = HYDROGRAPH 0001
        ID1= 1 (******):    23.35   0.109     8.08    37.65
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    23.35   0.109     8.08    37.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    23.35   0.109     8.08    37.65
      + ID2= 2 (******):     0.45   0.029     6.08    21.44
        ================================================
        ID = 1 (******):    23.80   0.118     6.08    37.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    23.80   0.118     6.08    37.35
      + ID2= 2 (******):   122.53   0.807     6.75    33.22
        ================================================
        ID = 3 (******):   146.32   0.916     6.75    33.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.114 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.478
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.19   0.114     6.17    21.48
      + ID2= 2 (******):   146.32   0.916     6.75    33.89
        ================================================
        ID = 3 (******):   148.51   0.960     6.67    33.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         429.12         0.0450
                  37.54         428.86         0.0450
                  53.31         428.70         0.0450
                  81.17         428.24         0.0450
                  99.28         428.15    0.0450 /0.0350  Main Channel
                 114.53         427.72         0.0350      Main Channel
                 119.88         426.51         0.0350      Main Channel
                 124.17         425.84         0.0350      Main Channel
                 206.01         425.90         0.0350      Main Channel
                 209.64         426.51         0.0350      Main Channel
                 214.21         426.89         0.0350      Main Channel
                 231.49         427.17         0.0350      Main Channel
                 268.61         427.89    0.0350 /0.0450  Main Channel
                 351.58         428.15         0.0450
                 368.27         428.31         0.0450
                 405.75         428.52         0.0450
                 416.79         428.59         0.0450
                 440.06         428.76         0.0450
                 469.88         428.97         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   426.00    .218E+04       4.1          0.39       8.87
        0.31   426.16    .495E+04      15.8          0.67       5.22
        0.47   426.32    .779E+04      33.2          0.89       3.92
        0.63   426.47    .107E+05      55.4          1.08       3.22
        0.79   426.63    .137E+05      81.8          1.25       2.78
        0.94   426.79    .167E+05     112.4          1.40       2.48
        1.10   426.95    .199E+05     144.6          1.52       2.29
        1.26   427.10    .233E+05     176.4          1.58       2.20
        1.42   427.26    .271E+05     214.5          1.65       2.11
        1.57   427.42    .312E+05     258.4          1.73       2.01
        1.73   427.58    .356E+05     307.7          1.81       1.93
        1.89   427.73    .402E+05     362.0          1.88       1.85
        2.05   427.89    .452E+05     415.1          1.91       1.82
        2.23   428.07    .525E+05     501.3          1.99       1.74
        2.41   428.25    .621E+05     609.1          2.05       1.70
        2.59   428.43    .733E+05     739.1          2.10       1.65
        2.77   428.61    .862E+05     886.8          2.15       1.62
        2.95   428.79    .101E+06    1053.9          2.19       1.59
        3.13   428.97    .116E+06    1240.2          2.22       1.57

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   148.51     0.96    6.67  33.71      0.04      0.39
   OUTFLOW: ID= 1 (******)   148.51     0.94    6.92  33.71      0.04      0.39


--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    148.51   0.938     6.92    33.71
```

```
       + ID2= 2 (******):    53.26   0.909     6.92    28.76
         =============================================
         ID = 3 (******):   201.77   1.847     6.92    32.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.016 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.393
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.445

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
         ID1= 1 (******):     0.22   0.016     6.00    21.39
       + ID2= 2 (******):     0.00   0.000     0.00     0.00
         =============================================
         ID = 3 (******):     0.22   0.016     6.00    21.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        433.07        0.0450
                  59.66        432.39        0.0450
                  94.25        432.03        0.0450
                 115.71        431.82        0.0450
                 143.84        431.84    0.0450 /0.0350  Main Channel
                 163.59        431.75        0.0350      Main Channel
                 177.84        431.73        0.0350      Main Channel
                 199.51        431.70        0.0350      Main Channel
                 231.74        431.53        0.0350      Main Channel
                 283.71        431.44        0.0350      Main Channel
                 294.09        431.43        0.0350      Main Channel
                 325.65        431.42        0.0350      Main Channel
                 355.24        431.24        0.0350      Main Channel
                 383.70        431.43        0.0350      Main Channel
                 476.17        432.06    0.0350 /0.0450  Main Channel
                 510.88        432.23        0.0450
                 558.61        432.37        0.0450
                 589.84        432.57        0.0450
                 622.97        432.73        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   431.32    .108E+03       0.3         0.30       6.68
        0.15   431.39    .434E+03       1.7         0.47       4.21
        0.23   431.47    .119E+04       5.0         0.50       3.99
        0.30   431.54    .252E+04      13.9         0.66       3.02
        0.38   431.62    .417E+04      29.3         0.84       2.37
        0.45   431.69    .604E+04      50.1         0.99       2.01
        0.53   431.77    .828E+04      73.9         1.06       1.87
        0.60   431.84    .109E+05     108.8         1.19       1.67
        0.68   431.92    .142E+05     159.5         1.34       1.48
        0.76   432.01    .176E+05     219.4         1.48       1.34
        0.84   432.09    .213E+05     290.0         1.62       1.22
        0.92   432.17    .252E+05     374.6         1.77       1.12
        1.01   432.25    .293E+05     469.2         1.91       1.04
        1.09   432.33    .338E+05     573.9         2.02       0.98
        1.17   432.41    .386E+05     689.9         2.13       0.93
        1.25   432.49    .435E+05     817.2         2.24       0.89
        1.33   432.57    .487E+05     955.3         2.34       0.85
        1.41   432.65    .541E+05    1103.5         2.43       0.82
        1.49   432.73    .597E+05    1262.7         2.52       0.79

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)    0.22     0.02    6.00  21.39      0.00      0.30
   OUTFLOW: ID= 1 (******)    0.22     0.01    6.17  21.38      0.00      0.30


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.032 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  21.394
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.445

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.177 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  21.485
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     3.87   0.177     6.17    21.49
       + ID2= 2 (******):     0.45   0.032     6.00    21.39
         =============================================
         ID = 3 (******):     4.32   0.200     6.17    21.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     4.32   0.200     6.17    21.48
       + ID2= 2 (******):     0.22   0.013     6.17    21.38
         =============================================
         ID = 1 (******):     4.54   0.213     6.17    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        430.79        0.0450
                  23.82        429.79    0.0450 /0.0350  Main Channel
                  44.05        429.11        0.0350      Main Channel
                  70.46        428.15        0.0350      Main Channel
                 112.31        427.60        0.0350      Main Channel
                 150.77        427.27        0.0350      Main Channel
                 179.17        427.15        0.0350      Main Channel
                 214.90        427.16        0.0350      Main Channel
                 261.89        427.25        0.0350      Main Channel
                 317.65        427.56        0.0350      Main Channel
                 382.75        427.99        0.0350      Main Channel
                 394.40        428.11        0.0350      Main Channel
                 432.80        428.07        0.0350      Main Channel
                 432.91        428.07        0.0350      Main Channel
                 462.57        428.15        0.0350      Main Channel
                 522.90        429.79    0.0350 /0.0450  Main Channel
                 585.04        429.90        0.0450
                 731.92        430.62        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04      11.5         0.73       2.99
        0.35   427.50    .570E+04      49.9         1.15       1.91
        0.53   427.68    .105E+05     119.2         1.49       1.47
        0.70   427.85    .163E+05     221.8         1.79       1.22
        0.88   428.03    .229E+05     360.8         2.06       1.06
        1.06   428.21    .312E+05     509.7         2.14       1.02
        1.23   428.38    .405E+05     771.0         2.49       0.88
        1.41   428.56    .500E+05    1076.3         2.82       0.77
        1.58   428.73    .598E+05    1423.8         3.12       0.70
        1.76   428.91    .699E+05    1812.5         3.40       0.64
        1.94   429.09    .802E+05    2241.5         3.66       0.60
        2.11   429.26    .907E+05    2709.1         3.91       0.56
        2.29   429.44    .102E+06    3215.8         4.15       0.53
        2.46   429.61    .113E+06    3761.6         4.38       0.50
        2.64   429.79    .124E+06    4346.4         4.59       0.48
        2.85   430.00    .139E+06    5173.9         4.88       0.45
        3.06   430.20    .156E+06    6075.9         5.12       0.43
        3.26   430.41    .173E+06    7054.9         5.33       0.41
        3.47   430.62    .193E+06    8114.3         5.52       0.40

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)    4.54     0.21    6.17  21.47      0.00      0.73
   OUTFLOW: ID= 1 (******)    4.54     0.21    6.25  21.47      0.00      0.73


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.057 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.467
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.447

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.046 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  21.429
     TOTAL RAINFALL   (mm)=  48.071
     RUNOFF COEFFICIENT   =   0.446

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.69   0.046     6.08    21.43
       + ID2= 2 (******):     0.97   0.057     6.08    21.47
         =============================================
         ID = 3 (******):     1.66   0.103     6.08    21.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     1.66   0.103     6.08    21.45
       + ID2= 2 (******):     4.54   0.208     6.25    21.47
         =============================================
         ID = 3 (******):     6.20   0.299     6.17    21.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):      6.20      0.30      6.17    21.47
     ================================================
     ID= 2  (   2)    :      6.20      0.30      6.17    21.47
     ID= 3  (   2)    :      0.00      0.00      6.17    21.47
     ID= 4  (   2)    :      0.00      0.00      0.00     0.00
     ID= 5  (   2)    :      0.00      0.00      0.00     0.00
     ID= 6  (   2)    :      0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------

                                    IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=           0.96          0.25
     Dep. Storage     (mm)=           2.00          4.48
     Average Slope     (%)=           0.64          0.54
     Length            (m)=          63.89        157.20
     Mannings n           =          0.013         0.030

     Max.Eff.Inten.(mm/hr)=          63.34         36.19
                   over (min)         5.00         10.00
     Storage Coeff.  (min)=          2.68 (ii)     7.38 (ii)
     Unit Hyd. Tpeak (min)=          5.00         10.00
```

```
14077>      Unit Hyd. peak  (cms)=       0.29         0.13
14078>                                                          *TOTALS*
14079>      PEAK FLOW       (cms)=       0.17         0.02          0.188 (iii)
14080>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
14081>      RUNOFF VOLUME    (mm)=      46.07        21.49          40.91
14082>      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
14083>      RUNOFF COEFFICIENT   =       0.96         0.45           0.85
14084>
14085> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
14086>
14087>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14088>             CN*  =  85.0    Ia = Dep. Storage  (Above)
14089>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14090>            THAN THE STORAGE COEFFICIENT.
14091>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14092>
14093> --------------------------------------------------------------------------------
14094> --------------------
14095> | CALIB              |
14096> | STANDHYD (******)|   Area    (ha)=   2.90
14097> |ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
14098> --------------------
14099>                              IMPERVIOUS    PERVIOUS (i)
14100>      Surface Area     (ha)=       2.32         0.58
14101>      Dep. Storage     (mm)=       2.00         4.48
14102>      Average Slope     (%)=       0.70         0.60
14103>      Length            (m)=     166.18       124.91
14104>      Mannings n           =      0.013        0.030
14105>
14106>      Max.Eff.Inten.(mm/hr)=      63.34        36.19
14107>                 over (min)        5.00        10.00
14108>      Storage Coeff.  (min)=       4.63 (ii)    8.50 (ii)
14109>      Unit Hyd. Tpeak (min)=       5.00        10.00
14110>      Unit Hyd. peak  (cms)=       0.22         0.12
14111>                                                          *TOTALS*
14112>      PEAK FLOW       (cms)=       0.40         0.04          0.441 (iii)
14113>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
14114>      RUNOFF VOLUME    (mm)=      46.07        21.49          41.15
14115>      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
14116>      RUNOFF COEFFICIENT   =       0.96         0.45           0.86
14117>
14118> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
14119>
14120>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14121>             CN*  =  85.0    Ia = Dep. Storage  (Above)
14122>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14123>            THAN THE STORAGE COEFFICIENT.
14124>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14125>
14126> --------------------------------------------------------------------------------
14127>
14128> --------------------
14129> | ADD HYD  (******)|
14130> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14131> --------------------         (ha)    (cms)    (hrs)     (mm)
14132>        ID1= 1 (******):     2.90   0.441     6.00    41.15
14133>      + ID2= 2 (******):     1.21   0.188     6.00    40.91
14134>        ==================================================
14135>        ID = 3 (******):     4.11   0.629     6.00    41.08
14136>
14137>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14138> --------------------------------------------------------------------------------
14139> --------------------
14140> | DIVERTHYD(******)|
14141> | IN= 1   # OUT= 5 |
14142> --------------------
14143>      Outflow / Inflow  Relationships
14144>
14145>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
14146>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
14147>        0.00     0.00     0.00     0.00     0.00     0.00
14148>        0.85     0.00     0.00     0.00     0.00     0.85
14149>        0.85     1.00     0.00     0.00     0.00     1.85
14150>        0.85   100.00     0.00     0.00     0.00   100.85
14151>
14152>                           AREA     QPEAK     TPEAK    R.V.
14153>                           (ha)     (cms)     (hrs)    (mm)
14154>      TOTAL HYD.(ID= 1):   4.11      0.63      6.00   41.08
14155>      ==================================================
14156>      ID= 2  (   2)    :   4.11      0.63      6.00   41.08
14157>      ID= 3  (   2)    :   0.00      0.00      6.00   41.08
14158>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
14159>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
14160>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
14161> --------------------------------------------------------------------------------
14162>
14163> --------------------
14164> | ADD HYD  (******)|
14165> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14166> --------------------         (ha)    (cms)    (hrs)     (mm)
14167>        ID1= 1 (******):     0.00   0.000     6.17    21.47
14168>      + ID2= 2 (******):     4.11   0.629     6.00    41.08
14169>        ==================================================
14170>        ID = 3 (******):     4.11   0.629     6.00    41.08
14171>
14172>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14173> --------------------------------------------------------------------------------
14174> --------------------
14175> | DIVERTHYD(******)|
14176> | IN= 1   # OUT= 5 |
14177> --------------------
14178>      Outflow / Inflow  Relationships
14179>
14180>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
14181>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
14182>        0.00     0.00     0.00     0.00     0.00     0.00
14183>        0.00     5.20     0.00     0.00     0.00     5.20
14184>        1.00     5.20     0.00     0.00     0.00     6.20
14185>      100.00     5.20     0.00     0.00     0.00   105.20
14186>
14187>                           AREA     QPEAK     TPEAK    R.V.
14188>                           (ha)     (cms)     (hrs)    (mm)
14189>      TOTAL HYD.(ID= 1):   4.11      0.63      6.00   41.08
14190>      ==================================================
14191>      ID= 2  (   2)    :   0.00      0.00      6.00   41.08
14192>      ID= 3  (   2)    :   4.11      0.63      6.00   41.08
14193>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
14194>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
14195>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
14196> --------------------------------------------------------------------------------
14197>
14198> --------------------
14199> | ADD HYD  (******)|
14200> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14201> --------------------         (ha)    (cms)    (hrs)     (mm)
14202>        ID1= 1 (******):     6.20   0.299     6.17    21.47
14203>      + ID2= 2 (******):     0.00   0.000     6.00    41.08
14204>        ==================================================
14205>        ID = 3 (******):     6.20   0.299     6.17    21.47
14206>
14207>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14208> --------------------------------------------------------------------------------
14209> --------------------
14210> | DIVERTHYD(******)|
14211> | IN= 1   # OUT= 5 |
14212> --------------------
14213>      Outflow / Inflow  Relationships
14214>
14215>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
14216>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
14217>        0.00     0.00     0.00     0.00     0.00     0.00
14218>        1.00     0.00     0.00     0.00     0.00     1.00
14219>      100.00     0.00     0.00     0.00     0.00   100.00
14220>
14221>                           AREA     QPEAK     TPEAK    R.V.
14222>                           (ha)     (cms)     (hrs)    (mm)
14223>      TOTAL HYD.(ID= 1):   6.20      0.30      6.17   21.47
14224>      ==================================================
14225>      ID= 2  (   2)    :   6.20      0.30      6.17   21.47
14226>      ID= 3  (   2)    :   0.00      0.00      6.17   21.47
14227>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
14228>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
14229>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
14230> --------------------------------------------------------------------------------
14231> --------------------
14232> | DIVERTHYD(******)|
14233> | IN= 1   # OUT= 5 |
14234> --------------------
14235>      Outflow / Inflow  Relationships
14236>
14237>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
14238>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
14239>        0.00     0.00     0.00     0.00     0.00     0.00
14240>        0.00     0.00     0.00     0.00     0.00     0.00
14241>        0.01     0.00     0.00     0.00     0.00     0.01
14242>        0.06     0.00     0.00     0.00     0.00     0.06
14243>        0.08     0.00     0.00     0.00     0.00     0.08
14244>        0.12     0.00     0.00     0.00     0.00     0.12
14245>        0.20     0.00     0.00     0.00     0.00     0.20
14246>        0.25     0.00     0.00     0.00     0.00     0.25
14247>        0.30     0.00     0.00     0.00     0.00     0.30
14248>        0.33     0.00     0.00     0.00     0.00     0.33
14249>        0.37     0.00     0.00     0.00     0.00     0.37
14250>        0.39     0.00     0.00     0.00     0.00     0.39
14251>        0.42     1.43     0.00     0.00     0.00     1.85
14252>        0.44     8.83     0.00     0.00     0.00     9.27
14253>        0.47    25.03     0.00     0.00     0.00    25.50
14254>        0.49    52.11     0.00     0.00     0.00    52.61
14255>        0.52    91.81     0.00     0.00     0.00    92.33
14256>        0.53   126.04     0.00     0.00     0.00   126.57
14257>
14258>                           AREA     QPEAK     TPEAK    R.V.
14259>                           (ha)     (cms)     (hrs)    (mm)
14260>      TOTAL HYD.(ID= 1):   6.20      0.30      6.17   21.47
14261>      ==================================================
14262>      ID= 2  (   2)    :   6.20      0.30      6.17   21.47
14263>      ID= 3  (   2)    :   0.00      0.00      6.17   21.47
14264>      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
14265>      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
14266>      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
14267> --------------------------------------------------------------------------------
14268> --------------------
14269> | CALIB              |
14270> | STANDHYD (******)|   Area    (ha)=   0.82
14271> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
14272> --------------------
14273>                              IMPERVIOUS    PERVIOUS (i)
14274>      Surface Area     (ha)=       0.81         0.01
14275>      Dep. Storage     (mm)=       2.00         4.48
14276>      Average Slope     (%)=       0.50         1.00
14277>      Length            (m)=      18.40         0.10
14278>      Mannings n           =      0.013        0.030
14279>
14280>      Max.Eff.Inten.(mm/hr)=      63.34        36.19
14281>                 over (min)        5.00         5.00
14282>      Storage Coeff.  (min)=       1.37 (ii)    1.38 (ii)
14283>      Unit Hyd. Tpeak (min)=       5.00         5.00
14284>      Unit Hyd. peak  (cms)=       0.33         0.33
14285>                                                          *TOTALS*
14286>      PEAK FLOW       (cms)=       0.14         0.00          0.144 (iii)
14287>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
14288>      RUNOFF VOLUME    (mm)=      46.07        21.49          45.82
14289>      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
14290>      RUNOFF COEFFICIENT   =       0.96         0.45           0.95
14291>
14292> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
14293>
14294>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
14295>             CN*  =  85.0    Ia = Dep. Storage  (Above)
14296>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
14297>            THAN THE STORAGE COEFFICIENT.
14298>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
14299>
14300> --------------------------------------------------------------------------------
14301>
14302> --------------------
14303> | ADD HYD  (******)|
14304> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14305> --------------------         (ha)    (cms)    (hrs)     (mm)
14306>        ID1= 1 (******):     0.82   0.144     6.00    45.82
14307>      + ID2= 2 (******):     0.00   0.000     6.17    21.47
14308>        ==================================================
14309>        ID = 3 (******):     0.82   0.144     6.00    45.82
14310>
14311>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14312> --------------------------------------------------------------------------------
14313>
14314> --------------------
14315> | ADD HYD  (******)|
14316> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
14317> --------------------         (ha)    (cms)    (hrs)     (mm)
14318>        ID1= 3 (******):     0.82   0.144     6.00    45.82
14319>      + ID2= 2 (******):     0.00   0.000     6.17    21.47
14320>        ==================================================
14321>        ID = 1 (******):     0.82   0.144     6.00    45.70
14322>
14323>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14324> --------------------------------------------------------------------------------
14325> --------------------
14326> | DIVERTHYD(******)|
14327> | IN= 1   # OUT= 5 |
14328> --------------------
14329>      Outflow / Inflow  Relationships
14330>
14331>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
14332>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
14333>        0.00     0.00     0.00     0.00     0.00     0.00
14334>        0.00     0.00     0.00     0.00     0.00     0.00
14335>        0.03     0.00     0.00     0.00     0.00     0.03
14336>        0.04     0.00     0.00     0.00     0.00     0.04
14337>        0.09     0.00     0.00     0.00     0.00     0.09
14338>        0.12     0.00     0.00     0.00     0.00     0.13
14339>        0.20     0.00     0.00     0.00     0.00     0.20
14340>        0.30     0.00     0.00     0.00     0.00     0.30
14341>        0.37     0.00     0.00     0.00     0.00     0.37
14342>        0.43     0.00     0.00     0.00     0.00     0.43
14343>        0.48     0.00     0.00     0.00     0.00     0.48
14344>        0.52     0.00     0.00     0.00     0.00     0.52
14345>        0.57     0.00     0.00     0.00     0.00     0.57
14346>        0.67     0.00     0.00     0.00     0.00     0.67
14347>        0.68     0.00     0.00     0.00     0.00     0.68
14348>        0.68     0.02     0.00     0.00     0.00     0.70
14349>        0.72     0.56     0.00     0.00     0.00     1.28
14350>        0.73     0.75     0.01     0.00     0.00     1.48
14351>        1.10     1.87     0.54     0.00     0.00     3.51
14352>        1.40     2.25     2.61     0.00     0.00     6.26
14353>
14354>                           AREA     QPEAK     TPEAK    R.V.
14355>                           (ha)     (cms)     (hrs)    (mm)
14356>      TOTAL HYD.(ID= 1):   0.82      0.14      6.00   45.70
14357>      ==================================================
14358>      ID= 2  (   3)    :   0.82      0.14      6.00   45.70
14359>      ID= 3  (   3)    :   0.00      0.00      6.00   45.70
14360>      ID= 4  (   3)    :   0.00      0.00      6.00   45.70
14361>      ID= 5  (   3)    :   0.00      0.00      0.00    0.00
14362>      ID= 6  (   3)    :   0.00      0.00      0.00    0.00
14363> --------------------------------------------------------------------------------
14364>
14365> --------------------
14366> | ADD HYD  (******)|
14367> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
14368> --------------------         (ha)    (cms)    (hrs)     (mm)
14369>        ID1= 1 (******):     6.20   0.299     6.17    21.47
14370>      + ID2= 2 (******):     0.82   0.144     6.00    45.70
14371>        ==================================================
14372>        ID = 3 (******):     7.02   0.375     6.00    24.30
14373>
14374>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
14375> --------------------------------------------------------------------------------
14376> --------------------
14377> | CALIB              |
14378> | STANDHYD (******)|   Area    (ha)=   8.58
14379> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
14380> --------------------
14381>                              IMPERVIOUS    PERVIOUS (i)
14382>      Surface Area     (ha)=       4.98         3.60
```

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      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.91         1.12
      Length            (m)=     246.54       157.18
      Mannings n           =      0.015        0.300

      Max.Eff.Inten.(mm/hr)=      63.34        15.70
                    over (min)        5.00        55.00
      Storage Coeff.  (min)=       5.91 (ii)   50.58 (ii)
      Unit Hyd. Tpeak (min)=       5.00        55.00
      Unit Hyd. peak  (cms)=       0.19         0.02
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.83         0.09          0.854 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.75          6.00
      RUNOFF VOLUME    (mm)=      46.07        21.49         35.74
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.45          0.74

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     8.58    0.854     6.00    35.74
      + ID2= 2 (******):   201.77    1.847     6.92    32.40
        ==========================================================
        ID = 3 ( 50650):   210.35    1.987     6.83    32.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50650):   210.35    1.987     6.83    32.54
      + ID2= 2 (******):     7.02    0.375     6.00    24.30
        ==========================================================
        ID = 1 ( 50650):   217.37    2.099     6.75    32.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        129.45        0.0450
                   6.00        129.24        0.0450
                   8.00        128.92        0.0450
                  10.00        128.26        0.0450
                  12.00        127.37        0.0450
                  14.00        126.79        0.0450
                  16.00        126.20        0.0450
                  18.00        125.80        0.0450
                  21.00        125.29        0.0450
                  24.00        124.85        0.0450
                  27.00        124.54        0.0350      Main Channel
                  30.00        124.62        0.0350      Main Channel
                  33.00        124.84    0.0350 /0.0450  Main Channel
                  36.00        125.26        0.0450
                  39.00        125.86        0.0450
                  42.00        126.49        0.0450
                  48.00        128.97        0.0450
                  54.00        129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.26  124.80    .390E+03       0.9         0.76       7.18
        0.51  125.06    .124E+04       4.9         1.29       4.21
        0.77  125.31    .239E+04      12.3         1.67       3.25
        1.03  125.57    .380E+04      23.2         1.99       2.73
        1.28  125.83    .544E+04      37.9         2.27       2.40
        1.54  126.08    .731E+04      56.6         2.52       2.15
        1.80  126.34    .937E+04      79.6         2.77       1.96
        2.05  126.60    .116E+05     107.2         3.01       1.81
        2.31  126.85    .140E+05     139.3         3.25       1.67
        2.57  127.11    .165E+05     175.4         3.47       1.57
        2.82  127.37    .191E+05     215.7         3.68       1.48
        3.08  127.62    .219E+05     261.1         3.89       1.39
        3.34  127.88    .247E+05     310.7         4.10       1.32
        3.59  128.14    .276E+05     364.3         4.30       1.26
        3.85  128.40    .307E+05     421.6         4.48       1.21
        4.11  128.65    .338E+05     482.7         4.65       1.17
        4.36  128.91    .371E+05     548.1         4.82       1.13
        4.62  129.17    .406E+05     600.9         4.83       1.13
        4.88  129.42    .446E+05     634.1         4.63       1.17

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50650)  217.37     2.10    6.75  32.27      0.33      0.86
   OUTFLOW: ID= 1 ( 60650)  217.37     2.09    6.83  32.27      0.33      0.86



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| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      37.06        13.71
      Dep. Storage     (mm)=       2.00         6.10
      Average Slope     (%)=       1.50         1.50
      Length            (m)=     581.73        82.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=      63.34        18.78
                    over (min)       10.00        35.00
      Storage Coeff.  (min)=       8.51 (ii)   33.24 (ii)
      Unit Hyd. Tpeak (min)=       10.00        35.00
      Unit Hyd. peak  (cms)=       0.12         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.32         0.37          5.462 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.50          6.00
      RUNOFF VOLUME    (mm)=      46.07        16.90         37.90
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.35          0.79

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40670):    50.76    5.462     6.00    37.90
      + ID2= 2 ( 60650):   217.37    2.090     6.83    32.27
        ==========================================================
        ID = 3 ( 50670):   268.13    6.805     6.00    33.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        115.77        0.0450
                  20.00        115.51        0.0450
                  24.00        114.73        0.0450
                  28.00        113.17    0.0450 /0.0350  Main Channel
                  32.00        113.16    0.0350 /0.0450  Main Channel
                  36.00        114.68        0.0450
                  40.00        115.05        0.0450
                  44.00        115.27        0.0450
                  48.00        115.46        0.0450
                  52.00        115.71        0.0450
                  54.00        115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14  113.30    .275E+03       0.3         0.60      13.60
        0.27  113.43    .612E+03       1.2         0.93       8.76
        0.41  113.57    .996E+03       2.4         1.18       6.88
        0.55  113.71    .143E+04       4.1         1.39       5.85
        0.69  113.84    .191E+04       6.1         1.57       5.18
        0.82  113.98    .244E+04       8.6         1.73       4.70
        0.96  114.12    .301E+04      11.6         1.87       4.34
        1.10  114.26    .363E+04      14.9         2.00       4.06
        1.24  114.39    .430E+04      18.8         2.12       3.82
        1.37  114.53    .502E+04      23.1         2.24       3.63
        1.51  114.67    .579E+04      27.9         2.34       3.46
        1.65  114.81    .664E+04      32.5         2.38       3.41
        1.78  114.94    .763E+04      37.8         2.41       3.36
        1.92  115.08    .878E+04      44.0         2.44       3.33
        2.06  115.22    .101E+05      50.8         2.45       3.31
        2.20  115.35    .117E+05      58.8         2.46       3.30
        2.33  115.49    .134E+05      68.1         2.47       3.29
        2.47  115.63    .157E+05      74.2         2.30       3.53
        2.61  115.77    .188E+05      85.0         2.20       3.69

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50670)  268.13     6.81    6.00  33.34      0.72      1.61
   OUTFLOW: ID= 1 ( 60670)  268.13     6.49    6.08  33.34      0.70      1.59



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--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       6.22         4.63
      Dep. Storage     (mm)=       2.00         8.04
      Average Slope     (%)=       2.30         2.30
      Length            (m)=     269.03        47.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      63.34        22.18
                    over (min)        5.00        25.00
      Storage Coeff.  (min)=       4.71 (ii)   21.38 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.22         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.02         0.16          1.111 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      46.07        16.65         32.86
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.35          0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40700):    10.86    1.111     6.00    32.86
      + ID2= 2 ( 60670):   268.13    6.494     6.08    33.34
        ==========================================================
        ID = 3 ( 50680):   278.99    7.060     6.08    33.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.50         0.69
      Dep. Storage     (mm)=       2.00         7.98
      Average Slope     (%)=       0.60         0.60
      Length            (m)=      89.27        69.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      63.34        13.22
                    over (min)        5.00        45.00
      Storage Coeff.  (min)=       3.64 (ii)   42.26 (ii)
      Unit Hyd. Tpeak (min)=       5.00        45.00
      Unit Hyd. peak  (cms)=       0.25         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.08         0.02          0.085 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.67          6.00
      RUNOFF VOLUME    (mm)=      46.07        16.28         27.85
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.34          0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                           IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       7.93        17.56
      Dep. Storage     (mm)=       2.00         8.01
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     412.26        40.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      63.34        25.22
                    over (min)        5.00        20.00
      Storage Coeff.  (min)=       5.57 (ii)   18.71 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.20         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.18         0.62          1.579 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
      RUNOFF VOLUME    (mm)=      46.07        15.38         23.82
      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
      RUNOFF COEFFICIENT   =       0.96         0.32          0.50

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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```
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.085     6.00    27.85
      + ID2= 2 ( 40690):    25.49   1.579     6.00    23.82
        ================================================
        ID = 3 ( 50690):    26.69   1.664     6.00    24.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   278.99   7.060     6.08    33.32
      + ID2= 2 ( 50690):    26.69   1.664     6.00    24.00
        ================================================
        ID = 3 ( 50700):   305.68   8.492     6.00    32.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation      Manning
                   0.00         109.54       0.0450
                   4.00         108.85       0.0450
                   8.00         108.76       0.0450
                  12.00         108.31       0.0450
                  16.00         107.44       0.0450
                  20.00         107.22       0.0450
                  24.00         107.06       0.0450
                  28.00         107.10       0.0450
                  32.00         107.04       0.0450
                  36.00         106.98       0.0450
                  40.00         106.83       0.0350      Main Channel
                  44.00         106.49       0.0350      Main Channel
                  48.00         106.92    0.0350 /0.0450 Main Channel
                  52.00         107.19       0.0450
                  56.00         107.11       0.0450
                  60.00         107.14       0.0450
                  64.00         107.27       0.0450
                  68.00         107.71       0.0450
                  72.00         108.37       0.0450
                  80.00         109.55       0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   106.60    .128E+03       0.1         0.43      35.47
        0.23   106.72    .513E+03       0.4         0.69      22.34
        0.35   106.83    .115E+04       1.1         0.90      17.05
        0.52   107.00    .277E+04       3.6         1.21      12.69
        0.69   107.17    .675E+04       8.9         1.21      12.64
        0.86   107.34    .135E+05      19.9         1.35      11.35
        1.02   107.51    .211E+05      36.3         1.58       9.70
        1.19   107.68    .291E+05      57.8         1.82       8.39
        1.36   107.85    .375E+05      84.0         2.06       7.43
        1.53   108.02    .461E+05     114.5         2.28       6.71
        1.70   108.19    .550E+05     149.1         2.49       6.15
        1.87   108.35    .642E+05     187.4         2.68       5.71
        2.04   108.52    .737E+05     228.8         2.85       5.37
        2.21   108.69    .837E+05     274.1         3.01       5.09
        2.37   108.86    .942E+05     316.2         3.08       4.97
        2.54   109.03    .105E+06     372.6         3.25       4.72
        2.71   109.20    .117E+06     433.4         3.40       4.50
        2.88   109.37    .129E+06     498.6         3.55       4.31
        3.05   109.54    .141E+06     568.2         3.70       4.14

                                  <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  305.68     8.49    6.00  32.51      0.67      1.21
   OUTFLOW: ID= 1 ( 60700)  305.68     6.63    6.17  32.51      0.61      1.21


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--------------------
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n           =      0.015        0.360

     Max.Eff.Inten.(mm/hr)=      63.34        25.25
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       3.43 (ii)    16.08 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.26         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.23         0.18          0.346 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      46.07        15.36         21.73
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.32          0.45

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.346     6.00    21.73
      + ID2= 2 ( 60700):   305.68   6.634     6.17    32.51
        ================================================
        ID = 3 ( 50710):   312.03   6.860     6.17    32.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      63.34        31.18
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       5.59 (ii)    9.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.20         0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.52         0.24          3.756 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      46.07        17.63         41.42
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.37          0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7080      1.0040
                          0.2890      0.3890   |    0.7750      1.0700
                          0.3270      0.4500   |    0.9210      1.2580
                          0.3600      0.6030   |    1.0000      1.3280
                          0.3900      0.6540   |    1.0820      1.3980
                          0.4190      0.7110   |    1.1670      1.4690
                          0.4450      0.7680   |    1.2550      1.5390
                          0.4700      0.8260   |    1.3460      1.6090
                          0.4960      0.8830   |    1.9470      1.9930
                          0.6450      0.9400   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)    25.037     3.756      6.00      41.42
   OUTFLOW: ID= 1 ( 70150)    25.037     0.374      6.58      41.41
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.95
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6268

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  --------------------------
  | Junction Command(70151) |
  --------------------------

                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70150)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70151)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=      63.34        26.54
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.67 (ii)    16.34 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.82         0.14          1.910 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      46.07        16.38         38.65
     TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
     RUNOFF COEFFICIENT   =       0.96         0.34          0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.2230      0.3310
                          0.0580      0.0840   |    0.2500      0.3590
                          0.0780      0.1040   |    0.2790      0.3870
                          0.0930      0.1240   |    0.3090      0.4160
                          0.1060      0.1440   |    0.3750      0.4780
                          0.1180      0.1640   |    0.4110      0.5120
                          0.1280      0.1840   |    0.4470      0.5450
                          0.1590      0.2550   |    0.5250      0.6130
                          0.1770      0.2790   |    0.7390      0.9130
                          0.1990      0.3030   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)    14.155     1.910      6.00      38.65
   OUTFLOW: ID= 1 ( 70160)    14.155     0.217      6.58      38.62
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.34
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3237

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  --------------------------
  | Junction Command(70161) |
  --------------------------

                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70160)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70161)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   312.03   6.860     6.17    32.29
      + ID2= 2 ( 70150):    25.04   0.374     6.58    41.41
        ================================================
        ID = 3 ( 50730):   337.07   7.214     6.17    32.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   337.07   7.214     6.17    32.96
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50730):   337.07   7.214     6.17    32.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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14995> ------------------------------------------------------------------------------
14996>
14997> --------------------
14998> | ADD HYD  ( 50730)|
14999> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15000> --------------------         (ha)    (cms)    (hrs)     (mm)
15001>         ID1= 1 ( 50730):   337.07   7.214     6.17    32.96
15002>       + ID2= 2 ( 70160):    14.15   0.217     6.58    38.62
15003>         ==================================================
15004>         ID = 3 ( 50730):   351.22   7.407     6.17    33.19
15005>
15006>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15007> ------------------------------------------------------------------------------
15008>
15009> --------------------
15010> | ADD HYD  ( 50730)|
15011> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
15012> --------------------         (ha)    (cms)    (hrs)     (mm)
15013> *** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
15014> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
15015>         ID1= 3 ( 50730):   351.22   7.407     6.17    33.19
15016>       + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
15017>         ==================================================
15018>         ID = 1 ( 50730):   351.22   7.407     6.17    33.19
15019>
15020>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15021> ------------------------------------------------------------------------------
15022> --------------------
15023> | ROUTE CHN( 60730)|
15024> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
15025> --------------------
15026>                <------ DATA FOR SECTION (   1.1) ------>
15027>                Distance      Elevation       Manning
15028>                    0.00         96.28        0.0450
15029>                    9.00         95.39        0.0450
15030>                   12.00         94.87        0.0450
15031>                   15.00         94.17        0.0450
15032>                   18.00         93.95        0.0450
15033>                   21.00         94.01        0.0450
15034>                   24.00         93.92        0.0450
15035>                   27.00         93.98    0.0450 /0.0350  Main Channel
15036>                   30.00         93.33        0.0350      Main Channel
15037>                   32.00         93.73    0.0350 /0.0450  Main Channel
15038>                   34.00         94.58        0.0450
15039>                   35.00         95.06        0.0450
15040>                   40.00         95.32        0.0450
15041>                   45.00         96.12        0.0450
15042>
15043>       <---------------------- TRAVEL TIME TABLE ---------------------->
15044>        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
15045>          (m)      (m)     (cu.m.)      (cms)         (m/s)      (min)
15046>         0.13    93.46    .164E+03        0.0          0.36      89.51
15047>         0.26    93.60    .654E+03        0.2          0.57      56.39
15048>         0.40    93.73    .147E+04        0.6          0.75      43.03
15049>         0.55    93.88    .274E+04        1.4          0.99      32.63
15050>         0.70    94.03    .550E+04        2.8          1.00      32.28
15051>         0.85    94.18    .104E+05        5.8          1.08      29.94
15052>         1.00    94.33    .159E+05       10.1          1.24      26.04
15053>         1.15    94.48    .216E+05       15.6          1.41      22.97
15054>         1.29    94.63    .275E+05       22.2          1.57      20.64
15055>         1.44    94.78    .338E+05       29.9          1.72      18.84
15056>         1.59    94.93    .404E+05       38.6          1.86      17.44
15057>         1.74    95.08    .473E+05       48.0          1.97      16.40
15058>         1.89    95.23    .549E+05       58.1          2.05      15.76
15059>         2.04    95.38    .637E+05       70.1          2.14      15.14
15060>         2.19    95.53    .731E+05       83.0          2.21      14.67
15061>         2.34    95.68    .833E+05       97.5          2.27      14.23
15062>         2.49    95.83    .941E+05      113.5          2.34      13.82
15063>         2.64    95.98    .106E+06      131.2          2.41      13.42
15064>         2.79    96.13    .118E+06      150.7          2.48      13.05
15065>
15066>                                  <---- hydrograph ---->   <-pipe / channel->
15067>                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
15068>                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
15069>    INFLOW : ID= 2 ( 50730)  351.22     7.41    6.17  33.19      0.90      1.14
15070>    OUTFLOW: ID= 1 ( 60730)  351.22     5.25    6.67  33.19      0.82      1.07
15071>
15072>
15073>
15074> ------------------------------------------------------------------------------
15075> --------------------
15076> | CALIB            |
15077> | STANDHYD ( 40770)|   Area    (ha)=  69.43
15078> |ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
15079> --------------------
15080>                              IMPERVIOUS    PERVIOUS (i)
15081>      Surface Area     (ha)=      56.24         13.19
15082>      Dep. Storage     (mm)=       2.00          5.50
15083>      Average Slope     (%)=       1.70          1.70
15084>      Length            (m)=     680.34         43.00
15085>      Mannings n            =      0.015         0.270
15086>
15087>      Max.Eff.Inten.(mm/hr)=      63.34         28.56
15088>                    over (min)      10.00         25.00
15089>      Storage Coeff.  (min)=       9.00 (ii)    22.38 (ii)
15090>      Unit Hyd. Tpeak (min)=      10.00         25.00
15091>      Unit Hyd. peak  (cms)=       0.12          0.05
15092>                                                      *TOTALS*
15093>      PEAK FLOW       (cms)=       7.95          0.48        8.212 (iii)
15094>      TIME TO PEAK    (hrs)=       6.00          6.25         6.00
15095>      RUNOFF VOLUME    (mm)=      46.07         17.47        40.35
15096>      TOTAL RAINFALL   (mm)=      48.07         48.07        48.07
15097>      RUNOFF COEFFICIENT   =       0.96          0.36         0.84
15098>
15099>
15100>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15101>             CN*  =  79.5    Ia = Dep. Storage  (Above)
15102>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15103>            THAN THE STORAGE COEFFICIENT.
15104>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15105>
15106> ------------------------------------------------------------------------------
15107> --------------------
15108> | RESERVOIR( 70170)|     OVERFLOW IS ON
15109> | IN= 2---> OUT= 1 |
15110> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
15111> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
15112>                            0.0000      0.0000   |    3.6700      4.7800
15113>                            0.2600      1.6200   |    8.6400      6.0000
15114>                            1.4500      2.7100   |    0.0000      0.0000
15115>
15116>                                AREA     QPEAK     TPEAK       R.V.
15117>                                (ha)     (cms)     (hrs)       (mm)
15118>    INFLOW : ID= 2 ( 40770)     69.429      8.212      6.00      40.35
15119>    OUTFLOW: ID= 1 ( 70170)     69.429      0.654      7.17      40.33
15120>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
15121>
15122>                   TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
15123>                   CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
15124>                   PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
15125>
15126>                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  7.96
15127>                   TIME SHIFT OF PEAK FLOW          (min)= 70.00
15128>                   MAXIMUM  STORAGE   USED       (ha.m.)=  1.9808
15129>
15130> ------------------------------------------------------------------------------
15131>
15132>   --------------------------
15133>   | Junction Command(70171) |
15134>   --------------------------
15135>
15136>                             AREA     QPEAK   TPEAK     R.V.
15137>                             (ha)     (cms)    (hrs)    (mm)
15138>   INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
15139>   OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00
15140>
15141>   ------------------------------------------------------------------------------
15142>
15143> --------------------
15144> | ADD HYD  ( 50770)|
15145> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15146> --------------------         (ha)    (cms)    (hrs)     (mm)
15147>         ID1= 1 ( 60730):   351.22   5.248     6.67    33.19
15148>       + ID2= 2 ( 70170):    69.43   0.654     7.17    40.33
15149>         ==================================================
15150>         ID = 3 ( 50770):   420.65   5.844     6.67    34.37
15151>
15152>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15153> ------------------------------------------------------------------------------
15154>
15155> --------------------
15156> | ADD HYD  ( 50770)|
15157> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
15158> --------------------         (ha)    (cms)    (hrs)     (mm)
15159> *** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
15160> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
15161>         ID1= 3 ( 50770):   420.65   5.844     6.67    34.37
15162>       + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
15163>         ==================================================
15164>         ID = 1 ( 50770):   420.65   5.844     6.67    34.37
15165>
15166>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15167> ------------------------------------------------------------------------------
15168> --------------------
15169> | ROUTE CHN( 60770)|
15170> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
15171> --------------------
15172>                <------ DATA FOR SECTION (   1.1) ------>
15173>                Distance      Elevation       Manning
15174>                    0.00         92.38        0.0450
15175>                    3.00         90.34        0.0450
15176>                    6.00         89.94        0.0450
15177>                    9.00         89.83        0.0450
15178>                   12.00         89.80        0.0450
15179>                   15.00         89.72        0.0450
15180>                   18.00         89.58    0.0450 /0.0350  Main Channel
15181>                   21.00         89.15        0.0350      Main Channel
15182>                   24.00         89.82    0.0350 /0.0450  Main Channel
15183>                   27.00         89.76        0.0450
15184>                   30.00         89.78        0.0450
15185>                   33.00         89.79        0.0450
15186>                   36.00         89.80        0.0450
15187>                   39.00         89.72        0.0450
15188>                   42.00         90.35        0.0450
15189>                   45.00         91.36        0.0450
15190>                   48.00         92.10        0.0450
15191>                   51.00         92.21        0.0450
15192>                   54.00         92.34        0.0450
15193>                   56.00         92.35        0.0450
15194>
15195>       <---------------------- TRAVEL TIME TABLE ---------------------->
15196>        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
15197>          (m)      (m)     (cu.m.)      (cms)         (m/s)      (min)
15198>         0.15    89.29    .298E+02        0.0          0.31      13.27
15199>         0.29    89.44    .119E+03        0.2          0.50       8.36
15200>         0.44    89.58    .268E+03        0.7          0.65       6.38
15201>         0.61    89.76    .588E+03        1.9          0.79       5.25
15202>         0.78    89.93    .179E+04        5.1          0.71       5.86
15203>         0.96    90.10    .329E+04       11.4          0.87       4.79
15204>         1.13    90.27    .489E+04       20.2          1.03       4.03
15205>         1.30    90.45    .656E+04       31.5          1.19       3.47
15206>         1.47    90.62    .828E+04       45.0          1.35       3.06
15207>         1.65    90.79    .100E+05       60.5          1.50       2.76
15208>         1.82    90.97    .118E+05       77.9          1.64       2.53
15209>         1.99    91.14    .136E+05       97.1          1.77       2.34
15210>         2.17    91.31    .155E+05      118.1          1.90       2.18
15211>         2.34    91.48    .173E+05      140.6          2.02       2.06
15212>         2.51    91.66    .193E+05      164.7          2.13       1.95
15213>         2.68    91.83    .212E+05      190.5          2.23       1.86
15214>         2.86    92.00    .232E+05      218.0          2.33       1.78
15215>         3.03    92.18    .253E+05      242.7          2.39       1.74
15216>         3.20    92.35    .275E+05      262.6          2.37       1.75
15217>
15218>                                  <---- hydrograph ---->   <-pipe / channel->
15219>                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
15220>                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
15221>    INFLOW : ID= 2 ( 50770)  420.65     5.84    6.67  34.37      0.80      0.72
15222>    OUTFLOW: ID= 1 ( 60770)  420.65     5.79    6.75  34.37      0.80      0.72
15223>
15224>
15225>
15226> ------------------------------------------------------------------------------
15227> --------------------
15228> | CALIB            |
15229> | STANDHYD ( 40780)|   Area    (ha)=  24.57
15230> |ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
15231> --------------------
15232>                              IMPERVIOUS    PERVIOUS (i)
15233>      Surface Area     (ha)=      12.78         11.79
15234>      Dep. Storage     (mm)=       2.00          8.70
15235>      Average Slope     (%)=       1.50          1.50
15236>      Length            (m)=     404.74         43.00
15237>      Mannings n            =      0.015         0.330
15238>
15239>      Max.Eff.Inten.(mm/hr)=      63.34         19.36
15240>                    over (min)       5.00         30.00
15241>      Storage Coeff.  (min)=       6.85 (ii)    25.15 (ii)
15242>      Unit Hyd. Tpeak (min)=       5.00         30.00
15243>      Unit Hyd. peak  (cms)=       0.18          0.04
15244>                                                      *TOTALS*
15245>      PEAK FLOW       (cms)=       2.00          0.32        2.137 (iii)
15246>      TIME TO PEAK    (hrs)=       6.00          6.42         6.00
15247>      RUNOFF VOLUME    (mm)=      46.07         14.87        30.47
15248>      TOTAL RAINFALL   (mm)=      48.07         48.07        48.07
15249>      RUNOFF COEFFICIENT   =       0.96          0.31         0.63
15250>
15251>
15252>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15253>             CN*  =  78.6    Ia = Dep. Storage  (Above)
15254>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15255>            THAN THE STORAGE COEFFICIENT.
15256>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15257>
15258> ------------------------------------------------------------------------------
15259>
15260> --------------------
15261> | ADD HYD  ( 50780)|
15262> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15263> --------------------         (ha)    (cms)    (hrs)     (mm)
15264>         ID1= 1 ( 40780):    24.57   2.137     6.00    30.47
15265>       + ID2= 2 ( 60770):   420.65   5.793     6.75    34.37
15266>         ==================================================
15267>         ID = 3 ( 50780):   445.22   6.161     6.75    34.15
15268>
15269>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15270> ------------------------------------------------------------------------------
15271> --------------------
15272> | CALIB            |
15273> | STANDHYD ( 40790)|   Area    (ha)=   8.18
15274> |ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
15275> --------------------
15276>                              IMPERVIOUS    PERVIOUS (i)
15277>      Surface Area     (ha)=       5.38          2.81
15278>      Dep. Storage     (mm)=       2.00          5.74
15279>      Average Slope     (%)=       1.20          1.20
15280>      Length            (m)=     233.56         52.00
15281>      Mannings n            =      0.015         0.270
15282>
15283>      Max.Eff.Inten.(mm/hr)=      63.34         24.23
15284>                    over (min)       5.00         25.00
15285>      Storage Coeff.  (min)=       5.26 (ii)    23.04 (ii)
15286>      Unit Hyd. Tpeak (min)=       5.00         25.00
15287>      Unit Hyd. peak  (cms)=       0.21          0.05
15288>                                                      *TOTALS*
15289>      PEAK FLOW       (cms)=       0.87          0.10          0.928 (iii)
15290>      TIME TO PEAK    (hrs)=       6.00          6.25          6.00
15291>      RUNOFF VOLUME    (mm)=      46.07         17.71         35.52
15292>      TOTAL RAINFALL   (mm)=      48.07         48.07         48.07
15293>      RUNOFF COEFFICIENT   =       0.96          0.37          0.74
15294>
15295>
15296>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15297>             CN*  =  79.4    Ia = Dep. Storage  (Above)
15298>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15299>            THAN THE STORAGE COEFFICIENT.
15300>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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15301>
15302> ---------------------------------------------------------------------------------
15303> --------------------
15304> | CALIB            |
15305> | STANDHYD ( 40800)|   Area    (ha)=   5.15
15306> |ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
15307> --------------------
15308>                              IMPERVIOUS    PERVIOUS (i)
15309>      Surface Area     (ha)=       4.66         0.49
15310>      Dep. Storage     (mm)=       2.00         7.60
15311>      Average Slope     (%)=       1.40         1.40
15312>      Length            (m)=     185.29        48.00
15313>      Mannings n            =      0.015        0.330
15314>
15315>      Max.Eff.Inten.(mm/hr)=      63.34        19.39
15316>                    over (min)        5.00        25.00
15317>      Storage Coeff.  (min)=       4.37 (ii)   24.33 (ii)
15318>      Unit Hyd. Tpeak (min)=       5.00        25.00
15319>      Unit Hyd. peak  (cms)=       0.23         0.05
15320>                                                          *TOTALS*
15321>      PEAK FLOW       (cms)=       0.80         0.01          0.808 (iii)
15322>      TIME TO PEAK    (hrs)=       6.00         6.33           6.00
15323>      RUNOFF VOLUME    (mm)=      46.07        15.17          43.04
15324>      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
15325>      RUNOFF COEFFICIENT   =       0.96         0.32           0.90
15326>
15327> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
15328>
15329>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15330>                CN*  =  78.5    Ia = Dep. Storage  (Above)
15331>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15332>                THAN THE STORAGE COEFFICIENT.
15333>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15334>
15335> ---------------------------------------------------------------------------------
15336>
15337> --------------------
15338> | ADD HYD  ( 50795)|
15339> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15340> --------------------          (ha)    (cms)    (hrs)     (mm)
15341>         ID1= 1 ( 40790):     8.18   0.928     6.00    35.52
15342>       + ID2= 2 ( 40800):     5.15   0.808     6.00    43.04
15343>         ================================================
15344>         ID = 3 ( 50795):    13.33   1.736     6.00    38.42
15345>
15346>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15347> ---------------------------------------------------------------------------------
15348> --------------------
15349> | RESERVOIR( 70180)|     OVERFLOW IS ON
15350> | IN= 2---> OUT= 1 |
15351> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
15352> --------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
15353>                             0.0000      0.0000   |    0.7780      0.6570
15354>                             0.0040      0.0150   |    1.1550      0.7720
15355>                             0.0090      0.0810   |    1.5780      0.8930
15356>                             0.0120      0.1550   |    1.9240      0.9870
15357>                             0.0140      0.2370   |    2.4190      1.1190
15358>                             0.0160      0.3260   |    2.9510      1.2560
15359>                             0.0620      0.3720   |    3.5980      1.3270
15360>                             0.2560      0.4700   |    4.5570      1.3990
15361>                             0.5310      0.5740   |    5.7230      1.4730
15362>
15363>                                AREA     QPEAK     TPEAK       R.V.
15364>                                (ha)     (cms)     (hrs)       (mm)
15365>    INFLOW : ID= 2 ( 50795)     13.332     1.736      6.00      38.42
15366>    OUTFLOW: ID= 1 ( 70180)     13.332     0.091      8.00      38.35
15367>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
15368>
15369>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
15370>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
15371>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
15372>
15373>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.27
15374>                    TIME SHIFT OF PEAK FLOW          (min)=120.00
15375>                    MAXIMUM  STORAGE   USED        (ha.m.)=  0.3870
15376>
15377> ---------------------------------------------------------------------------------
15378>
15379>   --------------------------
15380>   | Junction Command(70181) |
15381>   --------------------------
15382>
15383>                             AREA     QPEAK   TPEAK     R.V.
15384>                             (ha)     (cms)    (hrs)    (mm)
15385>   INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
15386>   OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00
15387>
15388>   ------------------------------------------------------------------------------
15389> --------------------
15390> | CALIB            |
15391> | STANDHYD ( 40805)|   Area    (ha)=   3.57
15392> |ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
15393> --------------------
15394>                              IMPERVIOUS    PERVIOUS (i)
15395>      Surface Area     (ha)=       1.41         2.16
15396>      Dep. Storage     (mm)=       1.00         1.50
15397>      Average Slope     (%)=       1.00         2.00
15398>      Length            (m)=     154.27        40.00
15399>      Mannings n            =      0.013        0.250
15400>
15401>      Max.Eff.Inten.(mm/hr)=      63.34        43.06
15402>                    over (min)        5.00        15.00
15403>      Storage Coeff.  (min)=       3.98 (ii)   13.86 (ii)
15404>      Unit Hyd. Tpeak (min)=       5.00        15.00
15405>      Unit Hyd. peak  (cms)=       0.24         0.08
15406>                                                          *TOTALS*
15407>      PEAK FLOW       (cms)=       0.21         0.15          0.350 (iii)
15408>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
15409>      RUNOFF VOLUME    (mm)=      47.07        24.70          32.46
15410>      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
15411>      RUNOFF COEFFICIENT   =       0.98         0.51           0.68
15412>
15413> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
15414>
15415>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15416>                CN*  =  85.0    Ia = Dep. Storage  (Above)
15417>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15418>                THAN THE STORAGE COEFFICIENT.
15419>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15420>
15421> ---------------------------------------------------------------------------------
15422>
15423> --------------------
15424> | ADD HYD  ( 50790)|
15425> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15426> --------------------          (ha)    (cms)    (hrs)     (mm)
15427>         ID1= 1 ( 40805):     3.57   0.350     6.00    32.46
15428>       + ID2= 2 ( 70180):    13.33   0.091     8.00    38.35
15429>         ================================================
15430>         ID = 3 ( 50790):    16.90   0.364     6.00    37.11
15431>
15432>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15433> ---------------------------------------------------------------------------------
15434>
15435> --------------------
15436> | ADD HYD  ( 50790)|
15437> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
15438> --------------------          (ha)    (cms)    (hrs)     (mm)
15439> *** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
15440> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
15441>         ID1= 3 ( 50790):    16.90   0.364     6.00    37.11
15442>       + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
15443>         ================================================
15444>         ID = 1 ( 50790):    16.90   0.364     6.00    37.11
15445>
15446>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15447> ---------------------------------------------------------------------------------
15448>
15449> --------------------
15450> | ADD HYD  ( 50800)|
15451> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15452> --------------------          (ha)    (cms)    (hrs)     (mm)
15453>         ID1= 1 ( 50780):   445.22   6.161     6.75    34.15
15454>       + ID2= 2 ( 50790):    16.90   0.364     6.00    37.11
15455>         ================================================
15456>         ID = 3 ( 50800):   462.12   6.273     6.75    34.26
15457>
15458>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15459> ---------------------------------------------------------------------------------
15460> --------------------
15461> | ROUTE CHN( 60800)|
15462> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
15463> --------------------
15464>                 <------ DATA FOR SECTION (   1.1) ------>
15465>                 Distance      Elevation       Manning
15466>                     0.00         88.54        0.0450
15467>                     3.00         88.18        0.0450
15468>                     6.00         87.54        0.0450
15469>                     9.00         87.44        0.0450
15470>                    12.00         87.13        0.0450
15471>                    15.00         87.23        0.0450
15472>                    18.00         87.18        0.0450
15473>                    21.00         86.49    0.0450 /0.0350  Main Channel
15474>                    24.00         85.82        0.0350      Main Channel
15475>                    27.00         86.44    0.0350 /0.0450  Main Channel
15476>                    30.00         87.18        0.0450
15477>                    33.00         87.16        0.0450
15478>                    36.00         87.25        0.0450
15479>                    39.00         87.46        0.0450
15480>                    42.00         87.70        0.0450
15481>                    45.00         87.80        0.0450
15482>                    48.00         88.00        0.0450
15483>                    49.00         88.12        0.0450
15484>                    50.00         88.23        0.0450
15485>                    52.00         88.59        0.0450
15486>
15487>       <---------------------- TRAVEL TIME TABLE ----------------------->
15488>         DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
15489>           (m)      (m)     (cu.m.)       (cms)         (m/s)       (min)
15490>          0.12    85.95    .779E+02         0.0          0.37       48.75
15491>          0.25    86.07    .312E+03         0.2          0.59       30.71
15492>          0.37    86.19    .701E+03         0.5          0.77       23.44
15493>          0.49    86.32    .125E+04         1.1          0.94       19.35
15494>          0.62    86.44    .195E+04         1.9          1.09       16.67
15495>          0.77    86.59    .299E+04         3.8          1.36       13.29
15496>          0.92    86.74    .424E+04         6.2          1.59       11.42
15497>          1.07    86.89    .570E+04         9.3          1.77       10.25
15498>          1.22    87.04    .736E+04        13.0          1.92        9.44
15499>          1.37    87.19    .938E+04        16.8          1.94        9.33
15500>          1.52    87.34    .134E+05        22.9          1.86        9.74
15501>          1.66    87.49    .182E+05        31.1          1.86        9.72
15502>          1.81    87.64    .237E+05        41.6          1.91        9.51
15503>          1.96    87.79    .298E+05        53.9          1.96        9.22
15504>          2.11    87.94    .365E+05        68.9          2.05        8.84
15505>          2.26    88.09    .437E+05        86.5          2.15        8.43
15506>          2.41    88.24    .513E+05       106.2          2.25        8.04
15507>          2.56    88.39    .592E+05       128.2          2.36        7.69
15508>          2.71    88.54    .674E+05       152.5          2.46        7.36
15509>
15510>                                    <---- hydrograph ---->   <-pipe / channel->
15511>                                AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
15512>                                (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
15513>    INFLOW : ID= 2 ( 50800)   462.12     6.27     6.75   34.26       0.92       1.59
15514>    OUTFLOW: ID= 1 ( 60800)   462.12     6.17     6.92   34.26       0.91       1.58
15515>
15516>
15517>
15518> ---------------------------------------------------------------------------------
15519> --------------------
15520> | CALIB            |
15521> | STANDHYD ( 40820)|   Area    (ha)=  14.21
15522> |ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
15523> --------------------
15524>                              IMPERVIOUS    PERVIOUS (i)
15525>      Surface Area     (ha)=       2.98        11.23
15526>      Dep. Storage     (mm)=       2.00         9.57
15527>      Average Slope     (%)=       2.30         2.30
15528>      Length            (m)=     307.74        44.00
15529>      Mannings n            =      0.015        0.390
15530>
15531>      Max.Eff.Inten.(mm/hr)=      63.34        17.32
15532>                    over (min)        5.00        25.00
15533>      Storage Coeff.  (min)=       5.11 (ii)   23.98 (ii)
15534>      Unit Hyd. Tpeak (min)=       5.00        25.00
15535>      Unit Hyd. peak  (cms)=       0.21         0.05
15536>                                                          *TOTALS*
15537>      PEAK FLOW       (cms)=       0.31         0.29          0.457 (iii)
15538>      TIME TO PEAK    (hrs)=       6.00         6.33           6.00
15539>      RUNOFF VOLUME    (mm)=      46.07        12.81          17.13
15540>      TOTAL RAINFALL   (mm)=      48.07        48.07          48.07
15541>      RUNOFF COEFFICIENT   =       0.96         0.27           0.36
15542>
15543> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
15544>                YOU SHOULD CONSIDER SPLITTING THE AREA.
15545>
15546>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15547>                CN*  =  73.8    Ia = Dep. Storage  (Above)
15548>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15549>                THAN THE STORAGE COEFFICIENT.
15550>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15551>
15552> ---------------------------------------------------------------------------------
15553>
15554> --------------------
15555> | ADD HYD  ( 50820)|
15556> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15557> --------------------          (ha)    (cms)    (hrs)     (mm)
15558>         ID1= 1 ( 40820):    14.21   0.457     6.00    17.13
15559>       + ID2= 2 ( 60800):   462.12   6.168     6.92    34.26
15560>         ================================================
15561>         ID = 3 ( 50820):   476.33   6.341     6.83    33.75
15562>
15563>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15564> ---------------------------------------------------------------------------------
15565>
15566> --------------------
15567> | ADD HYD  ( 50830)|
15568> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15569> --------------------          (ha)    (cms)    (hrs)     (mm)
15570>         ID1= 1 ( 50500):  1190.37  23.902     7.08    29.90
15571>       + ID2= 2 ( 50820):   476.33   6.341     6.83    33.75
15572>         ================================================
15573>         ID = 3 ( 50830):  1666.70  30.066     7.00    31.00
15574>
15575>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15576> ---------------------------------------------------------------------------------
15577> --------------------
15578> | ROUTE CHN( 60830)|
15579> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
15580> --------------------
15581>                 <------ DATA FOR SECTION (   1.1) ------>
15582>                 Distance      Elevation       Manning
15583>                     0.00         82.12        0.0450
15584>                    20.00         81.53        0.0450
15585>                    24.00         81.26        0.0450
15586>                    28.00         81.27        0.0450
15587>                    32.00         80.34    0.0450 /0.0350  Main Channel
15588>                    36.00         79.95        0.0350      Main Channel
15589>                    40.00         80.78        0.0450
15590>                    44.00         81.45        0.0450
15591>                    48.00         81.53        0.0450
15592>                    52.00         81.49        0.0450
15593>                    56.00         81.51        0.0450
15594>                    60.00         81.58        0.0450
15595>                    64.00         81.58        0.0450
15596>                    68.00         81.61        0.0450
15597>                    72.00         81.75        0.0450
15598>                    80.00         82.07        0.0450
15599>
15600>       <---------------------- TRAVEL TIME TABLE ----------------------->
15601>         DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
15602>           (m)      (m)     (cu.m.)       (cms)         (m/s)       (min)
15603>          0.10    80.05    .555E+01         0.0          0.24        5.45
15604>          0.19    80.14    .222E+02         0.1          0.38        3.43
15605>          0.29    80.24    .499E+02         0.3          0.50        2.62
15606>          0.39    80.34    .888E+02         0.7          0.60        2.16
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15607>        0.50    80.45    .146E+03       1.4          0.77       1.68
15608>        0.62    80.57    .213E+03       2.5          0.91       1.43
15609>        0.73    80.68    .290E+03       3.8          1.02       1.27
15610>        0.85    80.80    .375E+03       5.4          1.13       1.15
15611>        0.96    80.91    .471E+03       7.6          1.26       1.03
15612>        1.08    81.03    .578E+03      10.1          1.37       0.95
15613>        1.19    81.14    .695E+03      13.0          1.46       0.89
15614>        1.31    81.26    .823E+03      16.2          1.53       0.85
15615>        1.43    81.37    .100E+04      19.7          1.53       0.85
15616>        1.54    81.49    .121E+04      24.1          1.56       0.84
15617>        1.66    81.60    .155E+04      29.0          1.46       0.89
15618>        1.77    81.72    .204E+04      36.4          1.39       0.93
15619>        1.89    81.84    .259E+04      45.6          1.38       0.95
15620>        2.00    81.95    .320E+04      56.7          1.38       0.94
15621>        2.12    82.07    .387E+04      69.6          1.40       0.93
15622>
15623>                                    <---- hydrograph ---->   <-pipe / channel->
15624>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
15625>                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
15626>    INFLOW : ID= 2 ( 50830) 1666.70    30.07    7.00  31.00      1.67      1.45
15627>    OUTFLOW: ID= 1 ( 60830) 1666.70    30.07    7.08  31.00      1.67      1.45
15628>
15629>
15630>
15631> --------------------------------------------------------------------------------
15632> --------------------
15633> | CALIB            |
15634> | STANDHYD ( 40830)|   Area    (ha)=  45.51
15635> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
15636> --------------------
15637>                              IMPERVIOUS    PERVIOUS (i)
15638>      Surface Area     (ha)=      30.36        15.15
15639>      Dep. Storage     (mm)=       2.00         5.54
15640>      Average Slope     (%)=       1.30         1.30
15641>      Length            (m)=     550.83        40.00
15642>      Mannings n           =      0.015        0.270
15643>
15644>      Max.Eff.Inten.(mm/hr)=      63.34        45.11
15645>                  over (min)      10.00        25.00
15646>      Storage Coeff.  (min)=       8.60 (ii)   20.16 (ii)
15647>      Unit Hyd. Tpeak (min)=      10.00        25.00
15648>      Unit Hyd. peak  (cms)=       0.12         0.05
15649>                                                          *TOTALS*
15650>      PEAK FLOW       (cms)=       3.53         0.92          4.064 (iii)
15651>      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
15652>      RUNOFF VOLUME    (mm)=      46.07        20.73         34.27
15653>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
15654>      RUNOFF COEFFICIENT   =       0.96         0.43          0.71
15655>
15656>
15657>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15658>             CN*  =  78.5    Ia = Dep. Storage  (Above)
15659>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15660>            THAN THE STORAGE COEFFICIENT.
15661>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15662>
15663> --------------------------------------------------------------------------------
15664> --------------------
15665> | CALIB            |
15666> | STANDHYD ( 40840)|   Area    (ha)=   2.04
15667> |ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
15668> --------------------
15669>                              IMPERVIOUS    PERVIOUS (i)
15670>      Surface Area     (ha)=       0.45         1.59
15671>      Dep. Storage     (mm)=       2.00         9.61
15672>      Average Slope     (%)=       3.20         3.20
15673>      Length            (m)=     116.69        69.00
15674>      Mannings n           =      0.015        0.370
15675>
15676>      Max.Eff.Inten.(mm/hr)=      63.34        15.36
15677>                  over (min)       5.00        30.00
15678>      Storage Coeff.  (min)=       2.59 (ii)   25.34 (ii)
15679>      Unit Hyd. Tpeak (min)=       5.00        30.00
15680>      Unit Hyd. peak  (cms)=       0.29         0.04
15681>                                                          *TOTALS*
15682>      PEAK FLOW       (cms)=       0.05         0.04          0.069 (iii)
15683>      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
15684>      RUNOFF VOLUME    (mm)=      46.07        13.38         18.09
15685>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
15686>      RUNOFF COEFFICIENT   =       0.96         0.28          0.38
15687>
15688> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
15689> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
15690>               YOU SHOULD CONSIDER SPLITTING THE AREA.
15691>
15692>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15693>             CN*  =  75.2    Ia = Dep. Storage  (Above)
15694>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15695>            THAN THE STORAGE COEFFICIENT.
15696>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15697>
15698> --------------------------------------------------------------------------------
15699>
15700> --------------------
15701> | ADD HYD  ( 50840)|
15702> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15703> --------------------         (ha)    (cms)    (hrs)      (mm)
15704>         ID1= 1 ( 40830):    45.51   4.064     6.00    34.27
15705>       + ID2= 2 ( 40840):     2.04   0.069     6.00    18.09
15706>         ================================================
15707>         ID = 3 ( 50840):    47.56   4.133     6.00    33.58
15708>
15709>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15710> --------------------------------------------------------------------------------
15711>
15712> --------------------
15713> | ADD HYD  ( 50840)|
15714> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
15715> --------------------         (ha)    (cms)    (hrs)      (mm)
15716>         ID1= 3 ( 50840):    47.56   4.133     6.00    33.58
15717>       + ID2= 2 ( 60830):  1666.70  30.074     7.08    31.00
15718>         ================================================
15719>         ID = 1 ( 50840):  1714.25  30.618     7.08    31.07
15720>
15721>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15722> --------------------------------------------------------------------------------
15723> --------------------
15724> | ROUTE CHN( 60840)|
15725> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
15726> --------------------
15727>                <------ DATA FOR SECTION (   1.1) ------>
15728>                Distance      Elevation       Manning
15729>                   0.00          82.18        0.0450
15730>                  32.00          79.04        0.0450
15731>                  40.00          78.76        0.0450
15732>                  48.00          78.58        0.0450
15733>                  56.00          78.21        0.0450
15734>                  64.00          76.89        0.0350      Main Channel
15735>                  72.00          78.08        0.0450
15736>                  80.00          79.44        0.0450
15737>                  88.00          80.28        0.0450
15738>                  96.00          80.92        0.0450
15739>                 104.00          81.29        0.0450
15740>                 112.00          81.62        0.0450
15741>                 120.00          81.76        0.0450
15742>                 128.00          81.81        0.0450
15743>                 140.00          82.02        0.0450
15744>
15745>       <---------------------- TRAVEL TIME TABLE ----------------------->
15746>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
15747>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
15748>         0.27    77.16    .320E+03       0.2          0.48      24.00
15749>         0.54    77.43    .128E+04       1.4          0.75      15.12
15750>         0.81    77.70    .288E+04       4.2          0.99      11.54
15751>         1.08    77.97    .512E+04       9.0          1.20       9.53
15752>         1.35    78.24    .799E+04      16.6          1.42       8.02
15753>         1.62    78.51    .119E+05      26.9          1.54       7.40
15754>         1.89    78.78    .176E+05      41.0          1.59       7.15
15755>         2.16    79.05    .252E+05      62.9          1.71       6.68
15756>         2.43    79.32    .341E+05      93.9          1.89       6.05
15757>         2.70    79.59    .438E+05     131.1          2.05       5.56
15758>         2.97    79.86    .544E+05     175.1          2.20       5.18
15759>         3.24    80.13    .660E+05     226.4          2.35       4.86
15760>         3.51    80.40    .787E+05     284.9          2.48       4.60
15761>         3.77    80.67    .924E+05     351.1          2.60       4.39
15762>         4.04    80.94    .107E+06     425.7          2.72       4.20
15763>         4.31    81.21    .124E+06     507.1          2.81       4.06
15764>         4.58    81.48    .141E+06     598.4          2.90       3.94
15765>         4.85    81.75    .161E+06     695.9          2.96       3.86
15766>         5.12    82.02    .185E+06     800.9          2.97       3.85
15767>
15768>                                    <---- hydrograph ---->   <-pipe / channel->
15769>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
15770>                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
15771>    INFLOW : ID= 2 ( 50840) 1714.25    30.62    7.08  31.07      1.69      1.55
15772>    OUTFLOW: ID= 1 ( 60840) 1714.25    30.36    7.17  31.07      1.68      1.55
15773>
15774>
15775>
15776> --------------------------------------------------------------------------------
15777> --------------------
15778> | CALIB            |
15779> | STANDHYD ( 40850)|   Area    (ha)=  26.33
15780> |ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
15781> --------------------
15782>                              IMPERVIOUS    PERVIOUS (i)
15783>      Surface Area     (ha)=       8.14        18.19
15784>      Dep. Storage     (mm)=       2.00         7.29
15785>      Average Slope     (%)=       2.00         2.00
15786>      Length            (m)=     418.93       142.00
15787>      Mannings n           =      0.015        0.310
15788>
15789>      Max.Eff.Inten.(mm/hr)=      63.34        13.19
15790>                  over (min)       5.00        50.00
15791>      Storage Coeff.  (min)=       6.41 (ii)   45.03 (ii)
15792>      Unit Hyd. Tpeak (min)=       5.00        50.00
15793>      Unit Hyd. peak  (cms)=       0.18         0.02
15794>                                                          *TOTALS*
15795>      PEAK FLOW       (cms)=       1.07         0.38          1.163 (iii)
15796>      TIME TO PEAK    (hrs)=       6.00         6.75          6.00
15797>      RUNOFF VOLUME    (mm)=      46.07        15.74         23.21
15798>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
15799>      RUNOFF COEFFICIENT   =       0.96         0.33          0.48
15800>
15801>
15802>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15803>             CN*  =  77.5    Ia = Dep. Storage  (Above)
15804>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15805>            THAN THE STORAGE COEFFICIENT.
15806>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15807>
15808> --------------------------------------------------------------------------------
15809>
15810> --------------------
15811> | ADD HYD  ( 50850)|
15812> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
15813> --------------------         (ha)    (cms)    (hrs)      (mm)
15814>         ID1= 1 ( 40850):    26.33   1.163     6.00    23.21
15815>       + ID2= 2 ( 60840):  1714.25  30.357     7.17    31.07
15816>         ================================================
15817>         ID = 3 ( 50850):  1740.58  30.703     7.17    30.96
15818>
15819>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
15820> --------------------------------------------------------------------------------
15821> --------------------
15822> | CALIB            |
15823> | STANDHYD ( 40880)|   Area    (ha)=  56.14
15824> |ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
15825> --------------------
15826>                              IMPERVIOUS    PERVIOUS (i)
15827>      Surface Area     (ha)=      20.77        35.37
15828>      Dep. Storage     (mm)=       2.00         8.79
15829>      Average Slope     (%)=       1.30         1.30
15830>      Length            (m)=     611.77       120.00
15831>      Mannings n           =      0.015        0.330
15832>
15833>      Max.Eff.Inten.(mm/hr)=      63.34        11.77
15834>                  over (min)      10.00        55.00
15835>      Storage Coeff.  (min)=       9.16 (ii)   52.32 (ii)
15836>      Unit Hyd. Tpeak (min)=      10.00        55.00
15837>      Unit Hyd. peak  (cms)=       0.12         0.02
15838>                                                          *TOTALS*
15839>      PEAK FLOW       (cms)=       2.72         0.63          2.844 (iii)
15840>      TIME TO PEAK    (hrs)=       6.00         6.83          6.00
15841>      RUNOFF VOLUME    (mm)=      46.07        15.63         25.98
15842>      TOTAL RAINFALL   (mm)=      48.07        48.07         48.07
15843>      RUNOFF COEFFICIENT   =       0.96         0.33          0.54
15844>
15845>
15846>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
15847>             CN*  =  79.9    Ia = Dep. Storage  (Above)
15848>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
15849>            THAN THE STORAGE COEFFICIENT.
15850>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
15851>
15852> --------------------------------------------------------------------------------
15853> --------------------
15854> | ROUTE CHN( 60880)|
15855> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
15856> --------------------
15857>                <------ DATA FOR SECTION (   1.1) ------>
15858>                Distance      Elevation       Manning
15859>                   0.00          85.55        0.0450
15860>                  24.00          85.23        0.0450
15861>                  28.00          85.17        0.0450
15862>                  32.00          85.07        0.0450
15863>                  36.00          84.96        0.0350      Main Channel
15864>                  40.00          84.96        0.0350      Main Channel
15865>                  44.00          85.00    0.0350 /0.0450  Main Channel
15866>                  48.00          85.03        0.0450
15867>                  52.00          85.18        0.0450
15868>                  56.00          85.22        0.0450
15869>                  60.00          85.31        0.0450
15870>                  64.00          85.33        0.0450
15871>                  68.00          85.38        0.0450
15872>                  80.00          85.59        0.0450
15873>
15874>       <---------------------- TRAVEL TIME TABLE ----------------------->
15875>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
15876>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
15877>         0.01    84.96    .992E+01       0.0          0.05     238.32
15878>         0.04    84.99    .159E+03       0.0          0.21      57.53
15879>         0.07    85.03    .408E+03       0.2          0.32      38.32
15880>         0.10    85.06    .751E+03       0.4          0.40      30.54
15881>         0.13    85.09    .114E+04       0.7          0.47      25.77
15882>         0.16    85.12    .158E+04       1.2          0.53      22.66
15883>         0.19    85.15    .206E+04       1.7          0.59      20.45
15884>         0.22    85.18    .259E+04       2.3          0.64      18.91
15885>         0.25    85.21    .321E+04       3.0          0.67      18.12
15886>         0.29    85.24    .393E+04       3.8          0.70      17.32
15887>         0.32    85.27    .473E+04       4.8          0.73      16.56
15888>         0.35    85.30    .562E+04       5.9          0.76      15.89
15889>         0.38    85.34    .663E+04       7.0          0.77      15.69
15890>         0.41    85.37    .777E+04       8.5          0.80      15.20
15891>         0.44    85.40    .902E+04      10.2          0.82      14.69
15892>         0.47    85.43    .104E+05      12.2          0.85      14.19
15893>         0.50    85.46    .118E+05      14.3          0.88      13.73
15894>         0.53    85.49    .133E+05      16.7          0.91      13.31
15895>         0.56    85.52    .150E+05      19.3          0.94      12.91
15896>
15897>                                    <---- hydrograph ---->   <-pipe / channel->
15898>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
15899>                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
15900>    INFLOW : ID= 2 ( 40880)    56.14     2.84    6.00  25.98      0.25      0.66
15901>    OUTFLOW: ID= 1 ( 60880)    56.14     1.88    6.17  25.96      0.20      0.61
15902>
15903>
15904>
15905> --------------------------------------------------------------------------------
15906> --------------------
15907> | ROUTEPIPE( 80880)|     PIPE Number      =   1.00
15908> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
15909> | DT=  5.0 min     |     Length        (m)= 888.03
15910> --------------------     Slope       (m/m)=  0.004
15911>                          Manning n        =  0.013
15912>
```

```
<----------------- TRAVEL TIME TABLE ---------------------->
  DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
    (m)      (cu.m.)      (cms)       (m/s)        min
   0.10     .213E+03       0.2        0.93        15.91
   0.20     .426E+03       0.7        1.41        10.53
   0.30     .639E+03       1.3        1.76         8.42
   0.40     .853E+03       2.0        2.04         7.25
   0.50     .107E+04       2.7        2.27         6.51
   0.60     .128E+04       3.6        2.47         5.99
   0.70     .149E+04       4.4        2.64         5.60
   0.80     .171E+04       5.4        2.79         5.30
   0.90     .192E+04       6.3        2.92         5.06
   1.00     .213E+04       7.3        3.04         4.87
   1.10     .234E+04       8.3        3.15         4.71
   1.20     .256E+04       9.3        3.24         4.57
   1.30     .277E+04      10.4        3.33         4.45
   1.40     .298E+04      11.4        3.40         4.35
   1.50     .320E+04      12.5        3.48         4.26
   1.60     .341E+04      13.6        3.54         4.18
   1.70     .362E+04      14.7        3.60         4.11
   1.80     .384E+04      15.8        3.66         4.05
   1.90     .405E+04      16.9        3.71         3.99
                                <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
 INFLOW : ID= 2 ( 60880)   56.14     1.88    6.17  25.96      0.39      2.01
 OUTFLOW: ID= 1 ( 80880)   56.14     1.77    6.25  25.96      0.37      1.95
```

```
| CALIB             |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
                          IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=      18.24        23.47
   Dep. Storage     (mm)=       2.00         8.20
   Average Slope     (%)=       1.10         1.10
   Length            (m)=     527.32        85.00
   Mannings n           =      0.015        0.350
   Max.Eff.Inten.(mm/hr)=      63.34        15.40
                 over (min)      10.00        45.00
   Storage Coeff.  (min)=       8.81 (ii)   43.13 (ii)
   Unit Hyd. Tpeak (min)=      10.00        45.00
   Unit Hyd. peak  (cms)=       0.12         0.03
                                                      *TOTALS*
   PEAK FLOW       (cms)=       1.97         0.55       2.126 (iii)
   TIME TO PEAK    (hrs)=       6.00         6.67       6.00
   RUNOFF VOLUME    (mm)=      46.07        15.44      25.50
   TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
   RUNOFF COEFFICIENT   =       0.96         0.32       0.53

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  75.6    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB             |
| STANDHYD ( 40890)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
                          IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=       8.41         5.15
   Dep. Storage     (mm)=       1.00         7.00
   Average Slope     (%)=       1.00         2.00
   Length            (m)=     300.67        43.00
   Mannings n           =      0.015        0.310
   Max.Eff.Inten.(mm/hr)=      63.34        41.70
                 over (min)       5.00        20.00
   Storage Coeff.  (min)=       6.47 (ii)   18.37 (ii)
   Unit Hyd. Tpeak (min)=       5.00        20.00
   Unit Hyd. peak  (cms)=       0.18         0.06
                                                      *TOTALS*
   PEAK FLOW       (cms)=       1.07         0.31       1.281 (iii)
   TIME TO PEAK    (hrs)=       6.00         6.17       6.00
   RUNOFF VOLUME    (mm)=      47.07        19.47      32.71
   TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
   RUNOFF COEFFICIENT   =       0.98         0.40       0.68

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  78.2    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
   TOTAL HYD.(ID= 1):  13.56      1.28      6.00   32.71
   ==================================================
   MAJOR SYS.(ID= 2):   0.44      0.32      6.00   32.71
   MINOR SYS.(ID= 3):  13.12      0.96      5.92   32.71

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71   2.126     6.00    25.50
      + ID2= 2 ( 50850):  1740.58  30.703     7.17    30.96
        ================================================
        ID = 3 ( 50890):  1782.29  31.223     7.17    30.83

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1782.29  31.223     7.17    30.83
      + ID2= 2 ( 80880):    56.14   1.767     6.25    25.96
        ================================================
        ID = 1 ( 50890):  1838.43  32.205     7.08    30.68

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  1838.43  32.205     7.08    30.68
      + ID2= 2 ( 90020):    13.12   0.960     5.92    32.71
        ================================================
        ID = 3 ( 50890):  1851.55  32.340     7.08    30.69

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
                 <------ DATA FOR SECTION (   1.1) ------>
                 Distance      Elevation       Manning
                     0.00         79.05        0.0450
                     2.00         78.40        0.0450
                     4.00         77.75        0.0450
                     6.00         77.16        0.0450
                     8.00         76.78        0.0450
                    10.00         76.65        0.0450
                    12.00         76.60        0.0450
                    14.00         76.58        0.0450
                    16.00         76.08        0.0450
                    18.00         75.49    0.0450 /0.0350  Main Channel
                    20.00         75.46        0.0350      Main Channel
                    22.00         75.52    0.0350 /0.0450  Main Channel
                    24.00         76.15        0.0450
                    26.00         76.44        0.0450
                    28.00         76.56        0.0450
                    30.00         76.68        0.0450
                    32.00         76.86        0.0450
                    34.00         77.01        0.0450
                    36.00         77.10        0.0450
                    40.00         79.16        0.0450

<---------------------- TRAVEL TIME TABLE ---------------------->
  DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
    (m)      (m)      (cu.m.)       (cms)        (m/s)       (min)
   0.03    75.49     .127E+02        0.0          0.14       32.03
   0.22    75.68     .231E+03        0.6          0.69        6.29
   0.40    75.87     .510E+03        2.0          1.01        4.28
   0.59    76.05     .849E+03        4.1          1.25        3.45
   0.78    76.24     .125E+04        6.9          1.43        3.02
   0.97    76.43     .175E+04       10.6          1.57        2.75
   1.15    76.62     .240E+04       14.6          1.57        2.75
   1.34    76.80     .343E+04       21.1          1.60        2.71
   1.53    76.99     .465E+04       30.1          1.68        2.58
   1.71    77.18     .605E+04       41.3          1.77        2.44
   1.90    77.36     .754E+04       55.7          1.92        2.26
   2.09    77.55     .908E+04       72.1          2.06        2.10
   2.27    77.74     .107E+05       90.6          2.20        1.96
   2.46    77.92     .123E+05      111.1          2.34        1.84
   2.65    78.11     .140E+05      133.5          2.48        1.74
   2.84    78.30     .157E+05      157.9          2.61        1.66
   3.02    78.49     .175E+05      184.1          2.73        1.58
   3.21    78.67     .193E+05      212.1          2.85        1.52
   3.40    78.86     .211E+05      242.1          2.97        1.46
                                <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
 INFLOW : ID= 2 ( 50890) 1851.55    32.34    7.08  30.69      1.56      1.70
 OUTFLOW: ID= 1 ( 60900) 1851.55    32.31    7.17  30.69      1.56      1.70

   **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
```

```
| CALIB             |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
                          IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=       4.77         2.15
   Dep. Storage     (mm)=       2.00         7.07
   Average Slope     (%)=       1.70         1.70
   Length            (m)=     214.73        44.00
   Mannings n           =      0.015        0.280
   Max.Eff.Inten.(mm/hr)=      63.34        51.02
                 over (min)       5.00        20.00
   Storage Coeff.  (min)=       4.51 (ii)   15.50 (ii)
   Unit Hyd. Tpeak (min)=       5.00        20.00
   Unit Hyd. peak  (cms)=       0.23         0.07
                                                      *TOTALS*
   PEAK FLOW       (cms)=       0.63         0.17       0.748 (iii)
   TIME TO PEAK    (hrs)=       6.00         6.17       6.00
   RUNOFF VOLUME    (mm)=      46.07        21.39      34.45
   TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
   RUNOFF COEFFICIENT   =       0.96         0.45       0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  78.9    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92   0.748     6.00    34.45
      + ID2= 2 ( 60900):  1851.55  32.312     7.17    30.69
        ================================================
        ID = 3 ( 50910):  1858.46  32.373     7.17    30.71

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB             |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
                          IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=       5.79         0.06
   Dep. Storage     (mm)=       2.00         4.48
   Average Slope     (%)=       1.70         1.00
   Length            (m)=      78.30         0.00
   Mannings n           =      0.013        0.030
   Max.Eff.Inten.(mm/hr)=      63.34        36.19
                 over (min)       5.00         5.00
   Storage Coeff.  (min)=       2.26 (ii)    2.26 (ii)
   Unit Hyd. Tpeak (min)=       5.00         5.00
   Unit Hyd. peak  (cms)=       0.30         0.30
                                                      *TOTALS*
   PEAK FLOW       (cms)=       1.02         0.01       1.024 (iii)
   TIME TO PEAK    (hrs)=       6.00         6.00       6.00
   RUNOFF VOLUME    (mm)=      46.07        21.49      45.82
   TOTAL RAINFALL   (mm)=      48.07        48.07      48.07
   RUNOFF COEFFICIENT   =       0.96         0.45       0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  85.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85   1.024     6.00    45.82
      + ID2= 2 (******):     0.00   0.000     6.00    45.70
        ================================================
        ID = 3 (******):     5.85   1.024     6.00    45.82

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000     6.00    41.08
      + ID2= 2 (******):     0.00   0.000     6.00    45.70
        ================================================
        ID = 3 (******):     0.00   0.000     6.00    45.51

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
 ---------------------------------------------------------------------------
 ---------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     0.00   0.000     6.00    45.51
       + ID2= 2 (******):     5.85   1.024     6.00    45.82
         ==================================================
         ID = 1 (******):     5.85   1.024     6.00    45.82

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 ---------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        426.51        0.0450
                    0.98        426.14        0.0350      Main Channel
                    2.04        426.14        0.0350      Main Channel
                   20.51        426.51        0.0350      Main Channel

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)    (cu.m.)       (cms)        (m/s)      (min)
         0.00  426.14   .579E+00         0.0         0.03     191.52
         0.02  426.16   .114E+02         0.0         0.14      39.52
         0.04  426.18   .285E+02         0.0         0.19      27.56
         0.06  426.20   .520E+02         0.0         0.24      22.17
         0.08  426.22   .818E+02         0.1         0.28      18.92
         0.10  426.24   .118E+03         0.1         0.32      16.68
         0.12  426.26   .161E+03         0.2         0.36      15.02
         0.14  426.27   .210E+03         0.3         0.39      13.73
         0.16  426.29   .265E+03         0.3         0.42      12.69
         0.18  426.31   .326E+03         0.5         0.45      11.82
         0.20  426.33   .394E+03         0.6         0.48      11.10
         0.22  426.35   .469E+03         0.7         0.51      10.47
         0.24  426.37   .549E+03         0.9         0.54       9.93
         0.26  426.39   .637E+03         1.1         0.56       9.46
         0.28  426.41   .730E+03         1.3         0.59       9.03
         0.30  426.43   .830E+03         1.6         0.62       8.65
         0.32  426.45   .936E+03         1.9         0.64       8.31
         0.34  426.47   .105E+04         2.2         0.67       8.01
         0.35  426.49   .117E+04         2.5         0.69       7.72

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    5.85     1.02     6.00   45.82      0.25      0.55
    OUTFLOW: ID= 1 (******)    5.85     0.85     6.00   45.65      0.23      0.52


 ---------------------------------------------------------------------------
 ---------------------
 | ROUTEPIPE(******)|     PIPE Number     =   1.00
 | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
 | DT=  5.0 min     |     Length       (m)= 372.00
 ---------------------     Slope      (m/m)=  0.004
                           Manning n       =  0.013

      <----------------- TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)      (cu.m.)      (cms)        (m/s)        min
         0.05     .423E+02         0.1         0.58       10.67
         0.09     .846E+02         0.2         0.90        6.89
         0.14     .127E+03         0.4         1.15        5.39
         0.19     .169E+03         0.6         1.36        4.55
         0.24     .211E+03         0.9         1.55        4.01
         0.28     .254E+03         1.2         1.71        3.63
         0.33     .296E+03         1.5         1.85        3.34
         0.38     .338E+03         1.8         1.99        3.12
         0.43     .381E+03         2.2         2.11        2.94
         0.47     .423E+03         2.5         2.22        2.80
         0.52     .465E+03         2.9         2.32        2.67
         0.57     .507E+03         3.3         2.41        2.57
         0.62     .550E+03         3.7         2.50        2.48
         0.66     .592E+03         4.1         2.58        2.40
         0.71     .634E+03         4.5         2.66        2.33
         0.76     .677E+03         5.0         2.73        2.27
         0.81     .719E+03         5.4         2.80        2.21
         0.85     .761E+03         5.9         2.86        2.17
         0.90     .804E+03         6.3         2.92        2.12
                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    4.11     0.63     6.00   41.08      0.19      1.37
    OUTFLOW: ID= 1 (******)    4.11     0.61     6.00   41.08      0.19      1.35


 ---------------------------------------------------------------------------
 ---------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   7.90   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.39

      Unit Hyd Qpeak  (cms)=   0.774

      PEAK FLOW       (cms)=   0.321 (i)
      TIME TO PEAK    (hrs)=   6.250
      RUNOFF VOLUME    (mm)=  21.488
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.447

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 ---------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   0.33   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.070

      PEAK FLOW       (cms)=   0.022 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  21.428
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.446

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.33   0.022     6.08    21.43
       + ID2= 2 (******):     7.90   0.321     6.25    21.49
         ==================================================
         ID = 3 (******):     8.23   0.335     6.25    21.49

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 ---------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=  17.88   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.423

      PEAK FLOW       (cms)=   0.624 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  21.490
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.447

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 ---------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   0.44   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.19

      Unit Hyd Qpeak  (cms)=   0.088

      PEAK FLOW       (cms)=   0.029 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  21.440
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.446

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    17.88   0.624     6.33    21.49
       + ID2= 2 (******):     0.44   0.029     6.08    21.44
         ==================================================
         ID = 3 (******):    18.32   0.638     6.33    21.49

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 ---------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   0.19   Curve Number    (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 ---------------------   U.H. Tp(hrs)=   0.15

      Unit Hyd Qpeak  (cms)=   0.048

      PEAK FLOW       (cms)=   0.014 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  21.365
      TOTAL RAINFALL   (mm)=  48.071
      RUNOFF COEFFICIENT   =   0.444

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.19   0.014     6.00    21.36
       + ID2= 2 (******):    18.32   0.638     6.33    21.49
         ==================================================
         ID = 3 (******):    18.51   0.643     6.33    21.49

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 ---------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):    18.51   0.643     6.33    21.49
       + ID2= 2 (******):     8.23   0.335     6.25    21.49
         ==================================================
         ID = 1 (******):    26.74   0.969     6.33    21.49

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 ---------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    26.74   0.969     6.33    21.49
       + ID2= 2 (******):     4.11   0.610     6.00    41.08
         ==================================================
         ID = 3 (******):    30.85   1.250     6.08    24.10

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 ---------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):    30.85   1.250     6.08    24.10
       + ID2= 2 (******):     5.85   0.850     6.00    45.65
         ==================================================
         ID = 1 (******):    36.70   2.056     6.00    27.53

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 ---------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        418.26        0.0450
                   40.58        417.27        0.0450
                   68.64        416.80        0.0450
                  140.74        415.56        0.0450
                  163.74        415.03    0.0450 /0.0350  Main Channel
                  211.93        413.30        0.0350      Main Channel
                  250.43        411.92        0.0350      Main Channel
                  258.86        411.77        0.0350      Main Channel
                  276.07        411.80        0.0350      Main Channel
                  290.03        411.70        0.0350      Main Channel
                  294.99        411.74        0.0350      Main Channel
                  298.74        411.97        0.0350      Main Channel
                  309.80        412.64        0.0350      Main Channel
                  321.40        413.39        0.0350      Main Channel
                  332.67        415.03    0.0350 /0.0450  Main Channel
                  344.47        416.63        0.0450
                  360.44        418.31        0.0450
                  381.73        419.43        0.0450
                  385.80        419.95        0.0450
                  389.30        420.75        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)    (cu.m.)       (cms)        (m/s)      (min)
         0.33  412.03   .115E+05        14.5         1.18      13.21
         0.67  412.36   .302E+05        61.5         1.91       8.18
         1.00  412.70   .535E+05       139.9         2.46       6.38
         1.33  413.03   .814E+05       252.5         2.91       5.37
         1.66  413.36   .114E+06       402.0         3.32       4.72
         2.00  413.70   .150E+06       597.3         3.74       4.19
         2.33  414.03   .190E+06       834.3         4.12       3.80
         2.66  414.36   .234E+06      1114.3         4.47       3.50
         2.99  414.69   .281E+06      1439.4         4.80       3.26
         3.33  415.03   .332E+06      1811.8         5.12       3.06
         3.69  415.39   .393E+06      2361.5         5.65       2.77
         4.05  415.75   .459E+06      2978.2         6.10       2.57
         4.41  416.10   .533E+06      3668.2         6.46       2.42
         4.76  416.46   .615E+06      4437.5         6.78       2.31
         5.12  416.82   .705E+06      5290.7         7.05       2.22
         5.48  417.18   .804E+06      6232.2         7.29       2.15
         5.84  417.54   .910E+06      7276.0         7.51       2.08
         6.20  417.90   .102E+07      8417.1         7.74       2.02
         6.56  418.26   .114E+07      9654.5         7.95       1.97

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    36.70     2.06     6.00   27.53      0.05      1.18
    OUTFLOW: ID= 1 (******)    36.70     1.51     6.25   27.53      0.03      1.18
```

```
16525>
16526>
16527>
16528> --------------------------------------------------------------------------------
16529> --------------------
16530> | CALIB            |
16531> | NASHYD   (******)|   Area     (ha)=  31.02   Curve Number   (CN)= 85.0
16532> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
16533> --------------------   U.H. Tp(hrs)=   0.55
16534>
16535>      Unit Hyd Qpeak  (cms)=   2.154
16536>
16537>      PEAK FLOW       (cms)=   0.983 (i)
16538>      TIME TO PEAK    (hrs)=   6.500
16539>      RUNOFF VOLUME    (mm)=  21.490
16540>      TOTAL RAINFALL   (mm)=  48.071
16541>      RUNOFF COEFFICIENT   =   0.447
16542>
16543>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16544>
16545> --------------------------------------------------------------------------------
16546>
16547> --------------------
16548> | ADD HYD  (******)|
16549> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
16550> --------------------         (ha)    (cms)    (hrs)     (mm)
16551>         ID1= 1 (******):    31.02   0.983     6.50    21.49
16552>       + ID2= 2 (******):    36.70   1.512     6.25    27.53
16553>         ================================================
16554>         ID = 3 (******):    67.72   2.432     6.33    24.77
16555>
16556>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
16557> --------------------------------------------------------------------------------
16558> ================================================================================
16559>
16560>        V    V   I    SSSSS  U   U    A    L             (v 6.2.2022)
16561>        V    V   I    SS     U   U   A A   L
16562>         V  V    I     SS    U   U  AAAAA  L
16563>         V  V    I      SS   U   U  A   A  L
16564>          VV     I    SSSSS  UUUUU  A   A  LLLLL
16565>
16566>         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
16567>        O   O    T      T    H   H   Y Y   MM MM  O   O
16568>        O   O    T      T    H   H    Y    M   M  O   O
16569>         OOO     T      T    H   H    Y    M   M   OOO
16570> Developed and Distributed by Smart City Water Inc
16571> Copyright 2007 - 2022 Smart City Water Inc
16572> All rights reserved.
16573>
16574>
16575>                  *****  D E T A I L E D   O U T P U T *****
16576>
16577>
16578>   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
16579>   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
16580>   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
16581>
16582>
16583> DATE: 02/19/2026                          TIME: 06:03:35
16584>
16585> USER:
16586>
16587>
16588>
16589> COMMENTS: _____________________________________________________
16590>
16591>
16592> --------------------------------------------------------------------------------
16593>   ************************************************
16594>   ** SIMULATION : 25 Year 12 hr 5 min SCS Type  **
16595>   ************************************************
16596>
16597>
16598> --------------------
16599> |    READ STORM    |    Filename: C:\Users\DPham\AppD
16600> |                  |              ata\Local\Temp\
16601> |                  |              10fc3edb-a74b-4f10-8c03-341fce89bc9e\9f1da688
16602> | Ptotal= 84.74 mm |    Comments: 25 Year 12 hr 5 min SCS Type II CC
16603> --------------------
16604>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
16605>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
16606>                  0.00    2.12 |  3.08    3.38 |  6.17   15.23 |  9.25    2.96
16607>                  0.08    2.12 |  3.17    3.38 |  6.25   15.23 |  9.33    2.96
16608>                  0.17    2.12 |  3.25    3.38 |  6.33   15.23 |  9.42    2.96
16609>                  0.25    2.12 |  3.33    3.38 |  6.42   15.23 |  9.50    2.96
16610>                  0.33    2.12 |  3.42    3.38 |  6.50    6.77 |  9.58    2.96
16611>                  0.42    2.12 |  3.50    3.38 |  6.58    6.77 |  9.67    2.96
16612>                  0.50    2.12 |  3.58    3.38 |  6.67    6.77 |  9.75    2.96
16613>                  0.58    2.12 |  3.67    3.38 |  6.75    6.77 |  9.83    2.96
16614>                  0.67    2.12 |  3.75    3.38 |  6.83    6.77 |  9.92    2.96
16615>                  0.75    2.12 |  3.83    3.38 |  6.92    6.77 | 10.00    1.69
16616>                  0.83    2.12 |  3.92    3.38 |  7.00    5.08 | 10.08    1.69
16617>                  0.92    2.12 |  4.00    5.08 |  7.08    5.08 | 10.17    1.69
16618>                  1.00    2.12 |  4.08    5.08 |  7.17    5.08 | 10.25    1.69
16619>                  1.08    2.12 |  4.17    5.08 |  7.25    5.08 | 10.33    1.69
16620>                  1.17    2.12 |  4.25    5.08 |  7.33    5.08 | 10.42    1.69
16621>                  1.25    2.12 |  4.33    5.08 |  7.42    5.08 | 10.50    1.69
16622>                  1.33    2.12 |  4.42    5.08 |  7.50    5.08 | 10.58    1.69
16623>                  1.42    2.12 |  4.50    6.77 |  7.58    5.08 | 10.67    1.69
16624>                  1.50    2.12 |  4.58    6.77 |  7.67    5.08 | 10.75    1.69
16625>                  1.58    2.12 |  4.67    6.77 |  7.75    5.08 | 10.83    1.69
16626>                  1.67    2.12 |  4.75    6.77 |  7.83    5.08 | 10.92    1.69
16627>                  1.75    2.12 |  4.83    6.77 |  7.92    5.08 | 11.00    1.69
16628>                  1.83    2.12 |  4.92    6.77 |  8.00    2.96 | 11.08    1.69
16629>                  1.92    2.12 |  5.00   10.15 |  8.08    2.96 | 11.17    1.69
16630>                  2.00    2.54 |  5.08   10.15 |  8.17    2.96 | 11.25    1.69
16631>                  2.08    2.54 |  5.17   10.15 |  8.25    2.96 | 11.33    1.69
16632>                  2.17    2.54 |  5.25   10.15 |  8.33    2.96 | 11.42    1.69
16633>                  2.25    2.54 |  5.33   10.15 |  8.42    2.96 | 11.50    1.69
16634>                  2.33    2.54 |  5.42   10.15 |  8.50    2.96 | 11.58    1.69
16635>                  2.42    2.54 |  5.50   40.60 |  8.58    2.96 | 11.67    1.69
16636>                  2.50    2.54 |  5.58   40.60 |  8.67    2.96 | 11.75    1.69
16637>                  2.58    2.54 |  5.67   40.60 |  8.75    2.96 | 11.83    1.69
16638>                  2.67    2.54 |  5.75  111.66 |  8.83    2.96 | 11.92    1.69
16639>                  2.75    2.54 |  5.83  111.66 |  8.92    2.96 | 12.00    1.69
16640>                  2.83    2.54 |  5.92  111.66 |  9.00    2.96 |
16641>                  2.92    2.54 |  6.00   15.23 |  9.08    2.96 |
16642>                  3.00    3.38 |  6.08   15.23 |  9.17    2.96 |
16643>
16644> --------------------------------------------------------------------------------
16645>
16646> --------------------
16647> | CALIB            |
16648> | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number   (CN)= 79.5
16649> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
16650> --------------------   U.H. Tp(hrs)=   0.47
16651>
16652>      Unit Hyd Qpeak  (cms)=   3.502
16653>
16654>      PEAK FLOW       (cms)=   2.958 (i)
16655>      TIME TO PEAK    (hrs)=   6.333
16656>      RUNOFF VOLUME    (mm)=  41.075
16657>      TOTAL RAINFALL   (mm)=  84.737
16658>      RUNOFF COEFFICIENT   =   0.485
16659>
16660>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16661>
16662> --------------------------------------------------------------------------------
16663> --------------------
16664> | CALIB            |
16665> | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number   (CN)= 79.4
16666> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
16667> --------------------   U.H. Tp(hrs)=   0.46
16668>
16669>      Unit Hyd Qpeak  (cms)=   4.557
16670>
16671>      PEAK FLOW       (cms)=   3.819 (i)
16672>      TIME TO PEAK    (hrs)=   6.333
16673>      RUNOFF VOLUME    (mm)=  40.979
16674>      TOTAL RAINFALL   (mm)=  84.737
16675>      RUNOFF COEFFICIENT   =   0.484
16676>
16677>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16678>
16679> --------------------------------------------------------------------------------
16680>
16681> --------------------
16682> | ADD HYD  ( 50010)|
16683> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
16684> --------------------         (ha)    (cms)    (hrs)     (mm)
16685>         ID1= 1 ( 40010):    43.09   2.958     6.33    41.08
16686>       + ID2= 2 ( 40030):    54.88   3.819     6.33    40.98
16687>         ================================================
16688>         ID = 3 ( 50010):    97.97   6.777     6.33    41.02
16689>
16690>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
16691> --------------------------------------------------------------------------------
16692> --------------------
16693> | ROUTE CHN( 60010)|
16694> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
16695> --------------------
16696>                 <------ DATA FOR SECTION (   1.1) ------>
16697>                 Distance      Elevation       Manning
16698>                     0.00         160.98        0.0450
16699>                    10.00         160.83        0.0450
16700>                    20.00         160.72        0.0450
16701>                    30.00         160.67        0.0450
16702>                    40.00         160.61        0.0450
16703>                    50.00         160.60        0.0450
16704>                    60.00         160.55        0.0450
16705>                    70.00         160.65        0.0450
16706>                    80.00         159.78        0.0450
16707>                    90.00         157.33    0.0450 /0.0350  Main Channel
16708>                   100.00         157.18        0.0350      Main Channel
16709>                   110.00         158.55        0.0450
16710>                   120.00         160.34        0.0450
16711>                   130.00         160.29        0.0450
16712>                   140.00         160.30        0.0450
16713>                   150.00         160.38        0.0450
16714>                   160.00         160.53        0.0450
16715>                   170.00         160.58        0.0450
16716>                   180.00         160.51        0.0450
16717>                   190.00         160.53        0.0450
16718>
16719>       <---------------------- TRAVEL TIME TABLE ----------------------->
16720>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
16721>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
16722>         0.15  157.33    .123E+04        0.4         0.43      57.39
16723>         0.32  157.50    .422E+04        2.5         0.88      27.82
16724>         0.49  157.67    .768E+04        6.3         1.20      20.47
16725>         0.66  157.83    .116E+05       11.5         1.45      16.89
16726>         0.83  158.00    .160E+05       18.2         1.67      14.70
16727>         0.99  158.17    .209E+05       26.5         1.86      13.18
16728>         1.16  158.34    .263E+05       36.3         2.03      12.06
16729>         1.33  158.51    .321E+05       47.9         2.19      11.18
16730>         1.50  158.68    .384E+05       62.7         2.40      10.21
16731>         1.67  158.84    .451E+05       79.9         2.60       9.41
16732>         1.84  159.01    .522E+05       99.0         2.79       8.79
16733>         2.00  159.18    .597E+05      120.2         2.96       8.28
16734>         2.17  159.35    .676E+05      143.3         3.11       7.86
16735>         2.34  159.52    .759E+05      168.5         3.26       7.51
16736>         2.51  159.69    .846E+05      195.8         3.40       7.20
16737>         2.68  159.86    .938E+05      224.4         3.52       6.97
16738>         2.85  160.02    .104E+06      254.6         3.61       6.78
16739>         3.02  160.19    .114E+06      287.5         3.70       6.62
16740>         3.18  160.36    .127E+06      315.8         3.64       6.72
16741>
16742>                                    <---- hydrograph ---->   <-pipe / channel->
16743>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
16744>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
16745>    INFLOW : ID= 2 ( 50010)   97.97     6.78    6.33   41.02      0.50       1.22
16746>    OUTFLOW: ID= 1 ( 60010)   97.97     5.65    6.58   41.02      0.46       1.13
16747>
16748>
16749>
16750> --------------------------------------------------------------------------------
16751> --------------------
16752> | CALIB            |
16753> | STANDHYD ( 40020)|   Area     (ha)=  51.32
16754> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
16755> --------------------
16756>                                  IMPERVIOUS    PERVIOUS (i)
16757>      Surface Area      (ha)=       33.87         17.45
16758>      Dep. Storage      (mm)=        2.00          6.20
16759>      Average Slope      (%)=        1.30          1.30
16760>      Length             (m)=      584.91         50.00
16761>      Mannings n            =       0.015         0.290
16762>
16763>      Max.Eff.Inten.(mm/hr)=      111.66        103.73
16764>                 over (min)          5.00         20.00
16765>      Storage Coeff.  (min)=         7.10 (ii)    17.00 (ii)
16766>      Unit Hyd. Tpeak (min)=         5.00         20.00
16767>      Unit Hyd. peak  (cms)=         0.17          0.06
16768>                                                          *TOTALS*
16769>      PEAK FLOW       (cms)=         8.19          2.65      10.097 (iii)
16770>      TIME TO PEAK    (hrs)=         6.00          6.17         6.00
16771>      RUNOFF VOLUME    (mm)=        82.74         48.95        67.87
16772>      TOTAL RAINFALL   (mm)=        84.74         84.74        84.74
16773>      RUNOFF COEFFICIENT   =         0.98          0.58         0.80
16774>
16775>
16776>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
16777>             CN*  =  79.5    Ia = Dep. Storage  (Above)
16778>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
16779>            THAN THE STORAGE COEFFICIENT.
16780>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16781>
16782> --------------------------------------------------------------------------------
16783>
16784> --------------------
16785> | ADD HYD  ( 50020)|
16786> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
16787> --------------------         (ha)    (cms)    (hrs)     (mm)
16788>         ID1= 1 ( 40020):    51.32  10.097     6.00    67.87
16789>       + ID2= 2 ( 60010):    97.97   5.651     6.58    41.02
16790>         ================================================
16791>         ID = 3 ( 50020):   149.29  11.077     6.00    50.25
16792>
16793>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
16794> --------------------------------------------------------------------------------
16795> --------------------
16796> | ROUTE CHN( 60020)|
16797> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
16798> --------------------
16799>                 <------ DATA FOR SECTION (   1.1) ------>
16800>                 Distance      Elevation       Manning
16801>                     0.00         153.66        0.0450
16802>                     1.00         153.24        0.0450
16803>                     2.00         152.95        0.0450
16804>                     3.00         152.70        0.0450
16805>                     4.00         152.40        0.0450
16806>                     5.00         152.09        0.0450
16807>                     6.00         151.83        0.0450
16808>                     7.00         151.60        0.0450
16809>                     8.00         151.49    0.0450 /0.0350  Main Channel
16810>                     9.00         151.42        0.0350      Main Channel
16811>                    10.00         151.38        0.0350      Main Channel
16812>                    11.00         151.40        0.0350      Main Channel
16813>                    12.00         151.38        0.0350      Main Channel
16814>                    13.00         151.38        0.0350      Main Channel
16815>                    14.00         151.38        0.0350      Main Channel
16816>                    15.00         151.50    0.0350 /0.0450  Main Channel
16817>                    16.00         151.56        0.0450
16818>                    17.00         151.60        0.0450
16819>                    25.00         153.59        0.0450
16820>                    26.00         153.63        0.0450
16821>
16822>       <---------------------- TRAVEL TIME TABLE ----------------------->
16823>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
16824>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
16825>         0.12  151.49    .140E+03        0.2         0.36      10.54
16826>         0.23  151.60    .355E+03        0.9         0.58       6.57
16827>         0.34  151.72    .624E+03        2.0         0.74       5.11
16828>         0.45  151.83    .916E+03        3.6         0.89       4.27
16829>         0.57  151.94    .123E+04        5.5         1.02       3.73
16830>         0.68  152.05    .157E+04        7.8         1.13       3.35
```

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16831>        0.79   152.17    .193E+04      10.5          1.24       3.06
16832>        0.90   152.28    .231E+04      13.6          1.34       2.83
16833>        1.02   152.39    .271E+04      17.1          1.43       2.65
16834>        1.13   152.50    .314E+04      20.9          1.52       2.50
16835>        1.24   152.62    .358E+04      25.2          1.60       2.37
16836>        1.35   152.73    .405E+04      29.8          1.67       2.26
16837>        1.47   152.84    .454E+04      34.9          1.75       2.17
16838>        1.58   152.95    .505E+04      40.3          1.81       2.09
16839>        1.69   153.07    .558E+04      46.2          1.88       2.01
16840>        1.80   153.18    .614E+04      52.6          1.95       1.95
16841>        1.92   153.29    .672E+04      59.4          2.01       1.88
16842>        2.03   153.40    .731E+04      66.7          2.07       1.83
16843>        2.14   153.52    .793E+04      74.5          2.14       1.77
16844>
16845>                                    <---- hydrograph ---->   <-pipe / channel->
16846>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
16847>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
16848>    INFLOW : ID= 2 ( 50020)  149.29   11.08    6.00  50.25      0.81       1.25
16849>    OUTFLOW: ID= 1 ( 60020)  149.29   10.35    6.00  50.25      0.79       1.23
16850>
16851>
16852>
16853> --------------------------------------------------------------------------------
16854> --------------------
16855> | CALIB            |
16856> | STANDHYD ( 40040)|   Area    (ha)=  70.68
16857> |ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
16858> --------------------
16859>                              IMPERVIOUS    PERVIOUS (i)
16860>      Surface Area     (ha)=      52.31        18.38
16861>      Dep. Storage     (mm)=       2.00         6.00
16862>      Average Slope     (%)=       1.20         1.20
16863>      Length            (m)=     686.45        52.00
16864>      Mannings n           =      0.015        0.280
16865>
16866>      Max.Eff.Inten.(mm/hr)=     111.66       131.42
16867>                  over (min)       10.00        20.00
16868>      Storage Coeff.  (min)=       8.01 (ii)   17.25 (ii)
16869>      Unit Hyd. Tpeak (min)=      10.00        20.00
16870>      Unit Hyd. peak  (cms)=       0.13         0.06
16871>                                                        *TOTALS*
16872>      PEAK FLOW       (cms)=      11.08         3.56        13.665 (iii)
16873>      TIME TO PEAK    (hrs)=       6.00         6.17         6.00
16874>      RUNOFF VOLUME    (mm)=      82.74        52.84        70.78
16875>      TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
16876>      RUNOFF COEFFICIENT   =       0.98         0.62         0.84
16877>
16878>
16879>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
16880>             CN*  =  79.4    Ia = Dep. Storage  (Above)
16881>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
16882>            THAN THE STORAGE COEFFICIENT.
16883>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
16884>
16885> --------------------------------------------------------------------------------
16886>
16887> --------------------
16888> | ADD HYD  ( 50220)|
16889> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
16890> --------------------         (ha)    (cms)    (hrs)     (mm)
16891>        ID1= 1 ( 40040):    70.68  13.665     6.00    70.78
16892>      + ID2= 2 ( 60020):   149.29  10.351     6.00    50.25
16893>        ================================================
16894>        ID = 3 ( 50220):   219.97  24.016     6.00    56.85
16895>
16896>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
16897> --------------------------------------------------------------------------------
16898> --------------------
16899> | RESERVOIR( 70010)|     OVERFLOW IS ON
16900> | IN= 2---> OUT= 1 |
16901> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
16902> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
16903>                            0.0000     0.0000   |    3.4010     4.4390
16904>                            0.0530     0.4910   |    4.8380     5.0560
16905>                            0.0890     0.7040   |    5.8470     5.5380
16906>                            0.2040     1.0890   |    6.5980     5.9190
16907>                            0.3240     1.4800   |    7.2560     6.2250
16908>                            0.3890     1.7490   |    7.9030     6.4820
16909>                            0.4470     1.9970   |    8.4910     6.6820
16910>                            0.5090     2.3490   |   12.0680     7.1150
16911>                            0.7420     2.9150   |   20.0000     7.2000
16912>                            1.7580     3.6690   |    0.0000     0.0000
16913>
16914>                               AREA     QPEAK     TPEAK       R.V.
16915>                               (ha)     (cms)     (hrs)       (mm)
16916>    INFLOW : ID= 2 ( 50220)    219.973   24.016     6.00       56.85
16917>    OUTFLOW: ID= 1 ( 70010)    219.973    6.936     7.08       56.83
16918>    OVERFLOW:ID= 3 (  0003)      0.000    0.000     0.00        0.00
16919>
16920>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
16921>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
16922>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
16923>
16924>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 28.88
16925>                    TIME SHIFT OF PEAK FLOW          (min)= 65.00
16926>                    MAXIMUM  STORAGE   USED       (ha.m.)=  6.0768
16927>
16928> --------------------------------------------------------------------------------
16929>
16930>   --------------------------
16931>   | Junction Command(70011) |
16932>   --------------------------
16933>
16934>                            AREA     QPEAK   TPEAK     R.V.
16935>                            (ha)     (cms)    (hrs)    (mm)
16936>   INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
16937>   OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00
16938>
16939>   --------------------------------------------------------------------------------
16940>
16941> --------------------
16942> | ADD HYD  ( 70012)|
16943> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
16944> --------------------         (ha)    (cms)    (hrs)     (mm)
16945> *** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
16946> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
16947>        ID1= 1 ( 70010):   219.97   6.936     7.08    56.83
16948>      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
16949>        ================================================
16950>        ID = 3 ( 70012):   219.97   6.936     7.08    56.83
16951>
16952>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
16953> --------------------------------------------------------------------------------
16954> --------------------
16955> | ROUTE CHN( 60040)|
16956> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
16957> --------------------
16958>               <------ DATA FOR SECTION (   1.1) ------>
16959>               Distance      Elevation       Manning
16960>                   0.00         148.49        0.0450
16961>                   3.00         148.12        0.0450
16962>                   6.00         148.07        0.0450
16963>                   9.00         147.63        0.0450
16964>                  12.00         147.56        0.0450
16965>                  15.00         147.55        0.0450
16966>                  18.00         147.46        0.0450
16967>                  21.00         147.41        0.0450
16968>                  24.00         147.36        0.0450
16969>                  27.00         147.38        0.0450
16970>                  30.00         147.22        0.0450
16971>                  33.00         147.00        0.0450
16972>                  36.00         146.34        0.0450
16973>                  39.00         145.57        0.0350      Main Channel
16974>                  42.00         145.39        0.0350      Main Channel
16975>                  45.00         145.66        0.0350      Main Channel
16976>                  48.00         146.68        0.0450
16977>                  51.00         147.50        0.0450
16978>                  55.00         148.22        0.0450
16979>                  60.00         148.42        0.0450
16980>
16981>       <---------------------- TRAVEL TIME TABLE ----------------------->
16982>        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
16983>          (m)      (m)     (cu.m.)       (cms)         (m/s)       (min)
16984>        0.09   145.48    .145E+03       0.0          0.25       83.65
16985>        0.18   145.57    .581E+03       0.2          0.40       52.70
16986>        0.35   145.74    .189E+04       1.1          0.73       29.09
16987>        0.52   145.91    .348E+04       2.7          0.99       21.52
16988>        0.68   146.07    .532E+04       5.0          1.19       17.84
16989>        0.85   146.24    .740E+04       7.9          1.36       15.60
16990>        1.02   146.41    .973E+04      11.5          1.51       14.07
16991>        1.19   146.58    .123E+05      15.9          1.64       12.94
16992>        1.35   146.74    .152E+05      21.2          1.78       11.93
16993>        1.52   146.91    .183E+05      27.8          1.94       10.99
16994>        1.69   147.08    .218E+05      35.0          2.05       10.39
16995>        1.86   147.25    .259E+05      43.0          2.12       10.03
16996>        2.02   147.41    .309E+05      50.6          2.09       10.18
16997>        2.19   147.58    .383E+05      61.5          2.05       10.37
16998>        2.36   147.75    .474E+05      77.1          2.07       10.25
16999>        2.52   147.91    .571E+05      95.6          2.14        9.95
17000>        2.69   148.08    .672E+05     116.0          2.20        9.65
17001>        2.86   148.25    .783E+05     138.1          2.25        9.45
17002>        3.03   148.42    .904E+05     163.4          2.31        9.22
17003>
17004>                                    <---- hydrograph ---->   <-pipe / channel->
17005>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
17006>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
17007>    INFLOW : ID= 2 ( 70012)  219.97    6.94    7.08  56.83      0.80       1.30
17008>    OUTFLOW: ID= 1 ( 60040)  219.97    6.75    7.33  56.83      0.78       1.29
17009>
17010>
17011>
17012> --------------------------------------------------------------------------------
17013> --------------------
17014> | CALIB            |
17015> | STANDHYD ( 40050)|   Area    (ha)=  52.28
17016> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
17017> --------------------
17018>                              IMPERVIOUS    PERVIOUS (i)
17019>      Surface Area     (ha)=      32.94        19.34
17020>      Dep. Storage     (mm)=       2.00         6.30
17021>      Average Slope     (%)=       3.30         3.30
17022>      Length            (m)=     590.36        68.00
17023>      Mannings n           =      0.015        0.270
17024>
17025>      Max.Eff.Inten.(mm/hr)=     111.66       117.58
17026>                  over (min)        5.00        15.00
17027>      Storage Coeff.  (min)=       5.40 (ii)   13.60 (ii)
17028>      Unit Hyd. Tpeak (min)=       5.00        15.00
17029>      Unit Hyd. peak  (cms)=       0.21         0.08
17030>                                                        *TOTALS*
17031>      PEAK FLOW       (cms)=       7.62         3.89        11.056 (iii)
17032>      TIME TO PEAK    (hrs)=       6.00         6.08         6.00
17033>      RUNOFF VOLUME    (mm)=      82.74        52.44        67.29
17034>      TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
17035>      RUNOFF COEFFICIENT   =       0.98         0.62         0.79
17036>
17037>
17038>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
17039>             CN*  =  81.3    Ia = Dep. Storage  (Above)
17040>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
17041>            THAN THE STORAGE COEFFICIENT.
17042>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
17043>
17044> --------------------------------------------------------------------------------
17045>
17046> --------------------
17047> | ADD HYD  ( 50040)|
17048> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
17049> --------------------         (ha)    (cms)    (hrs)     (mm)
17050>        ID1= 1 ( 40050):    52.28  11.056     6.00    67.29
17051>      + ID2= 2 ( 60040):   219.97   6.749     7.33    56.83
17052>        ================================================
17053>        ID = 3 ( 50040):   272.25  11.402     6.00    58.83
17054>
17055>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
17056> --------------------------------------------------------------------------------
17057> --------------------
17058> | ROUTE CHN( 60050)|
17059> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
17060> --------------------
17061>               <------ DATA FOR SECTION (   1.1) ------>
17062>               Distance      Elevation       Manning
17063>                   0.00         146.35        0.0450
17064>                  16.00         145.17        0.0450
17065>                  18.00         144.62        0.0450
17066>                  20.00         143.50        0.0450
17067>                  26.00         141.63        0.0350      Main Channel
17068>                  30.00         142.17        0.0350      Main Channel
17069>                  34.00         144.28        0.0450
17070>                  38.00         145.27        0.0450
17071>                  50.00         146.42        0.0450
17072>
17073>       <---------------------- TRAVEL TIME TABLE ----------------------->
17074>        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
17075>          (m)      (m)     (cu.m.)       (cms)         (m/s)       (min)
17076>        0.25   141.88    .129E+03       0.2          0.54       12.17
17077>        0.50   142.13    .516E+03       1.1          0.86        7.67
17078>        0.74   142.38    .111E+04       3.4          1.21        5.42
17079>        0.99   142.63    .184E+04       7.0          1.50        4.37
17080>        1.24   142.87    .269E+04      11.9          1.75        3.76
17081>        1.49   143.12    .366E+04      18.2          1.96        3.36
17082>        1.74   143.37    .476E+04      25.9          2.15        3.06
17083>        1.98   143.62    .597E+04      35.3          2.33        2.82
17084>        2.23   143.87    .729E+04      46.5          2.52        2.61
17085>        2.48   144.11    .869E+04      59.3          2.69        2.44
17086>        2.73   144.36    .102E+05      74.3          2.88        2.28
17087>        2.97   144.61    .118E+05      92.4          3.09        2.13
17088>        3.22   144.86    .136E+05     111.6          3.24        2.03
17089>        3.47   145.11    .156E+05     133.1          3.37        1.95
17090>        3.72   145.35    .178E+05     152.6          3.38        1.94
17091>        3.97   145.60    .206E+05     175.6          3.37        1.95
17092>        4.21   145.85    .239E+05     204.3          3.37        1.95
17093>        4.46   146.10    .279E+05     238.6          3.38        1.95
17094>        4.71   146.35    .324E+05     279.0          3.40        1.93
17095>
17096>                                    <---- hydrograph ---->   <-pipe / channel->
17097>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
17098>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
17099>    INFLOW : ID= 2 ( 50040)  272.25   11.40    6.00  58.83      1.21       1.72
17100>    OUTFLOW: ID= 1 ( 60050)  272.25   10.42    6.00  58.83      1.16       1.66
17101>
17102>
17103>
17104> --------------------------------------------------------------------------------
17105> --------------------
17106> | ROUTE CHN( 60060)|
17107> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
17108> --------------------
17109>               <------ DATA FOR SECTION (   1.1) ------>
17110>               Distance      Elevation       Manning
17111>                   0.00         142.52        0.0450
17112>                   2.00         142.41        0.0450
17113>                   4.00         142.26        0.0450
17114>                   6.00         142.08        0.0450
17115>                   8.00         141.85        0.0450
17116>                  10.00         141.61        0.0450
17117>                  12.00         141.38        0.0450
17118>                  14.00         141.11        0.0450
17119>                  16.00         140.93        0.0450
17120>                  18.00         140.83        0.0450
17121>                  20.00         140.73        0.0350      Main Channel
17122>                  22.00         140.55        0.0350      Main Channel
17123>                  24.00         140.49        0.0350      Main Channel
17124>                  26.00         140.65        0.0350      Main Channel
17125>                  28.00         141.04        0.0450
17126>                  30.00         141.72        0.0450
17127>                  32.00         142.19        0.0450
17128>                  40.00         142.50        0.0450
17129>
17130>       <---------------------- TRAVEL TIME TABLE ----------------------->
17131>        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
17132>          (m)      (m)     (cu.m.)       (cms)         (m/s)       (min)
17133>        0.08   140.57    .466E+02       0.0          0.23       24.59
17134>        0.15   140.65    .155E+03       0.2          0.38       14.98
17135>        0.23   140.73    .305E+03       0.5          0.51       11.12
17136>        0.34   140.84    .598E+03       1.2          0.68        8.29
```

```
        0.45   140.95    .995E+03       2.3          0.80       7.09
        0.56   141.06    .147E+04       3.9          0.91       6.22
        0.68   141.17    .201E+04       6.1          1.04       5.45
        0.79   141.28    .259E+04       8.8          1.16       4.89
        0.90   141.39    .321E+04      12.0          1.27       4.47
        1.01   141.50    .389E+04      15.6          1.36       4.16
        1.12   141.61    .461E+04      19.7          1.45       3.90
        1.23   141.72    .537E+04      24.3          1.54       3.69
        1.34   141.84    .619E+04      29.4          1.61       3.52
        1.45   141.95    .707E+04      35.0          1.68       3.37
        1.56   142.06    .799E+04      41.1          1.75       3.24
        1.67   142.17    .898E+04      47.8          1.81       3.13
        1.79   142.28    .101E+05      54.6          1.85       3.07
        1.90   142.39    .113E+05      62.1          1.87       3.03
        2.01   142.50    .127E+05      70.3          1.88       3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 60050)  272.25    10.42    6.00  58.83      0.84      1.21
    OUTFLOW: ID= 1 ( 60060)  272.25     9.90    6.08  58.83      0.82      1.19


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94         1.90
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       2.60         2.60
     Length            (m)=     137.56        98.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=     111.66        85.09
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       2.42 (ii)   16.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.30         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.23         0.25          0.412 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      82.74        48.68         57.63
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.57          0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40060):     2.84    0.412     6.00    57.63
     + ID2= 2 ( 60060):   272.25    9.897     6.08    58.83
       ====================================================
       ID = 3 ( 50070):   275.09   10.187     6.08    58.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30        13.55
     Dep. Storage     (mm)=       2.00         5.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     515.42        72.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     111.66       109.56
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       6.44 (ii)   17.73 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       6.24         2.25          7.874 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      82.74        52.12         68.65
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.62          0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40080):    39.85    7.874     6.00    68.65
     + ID2= 2 ( 50070):   275.09   10.187     6.08    58.82
       ====================================================
       ID = 3 ( 50080):   314.94   17.032     6.00    60.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         141.24        0.0450
                 40.00         140.58        0.0450
                 50.00         140.57        0.0450
                 60.00         140.36        0.0450
                 70.00         140.19        0.0450
                 80.00         140.15        0.0450
                 90.00         139.70        0.0450
                100.00         139.54        0.0350      Main Channel
                110.00         139.97        0.0450
                120.00         140.53        0.0450
                130.00         140.63        0.0450
                140.00         140.72        0.0450
                150.00         140.87        0.0450
                190.00         141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   139.63    .150E+03       0.1          0.18      43.53
        0.17   139.71    .598E+03       0.4          0.30      27.01
        0.26   139.80    .126E+04       1.1          0.42      19.24
        0.34   139.88    .209E+04       2.2          0.52      15.58
        0.43   139.97    .307E+04       3.8          0.60      13.36
        0.51   140.05    .420E+04       6.1          0.70      11.45
        0.60   140.14    .548E+04       9.0          0.79      10.19
        0.68   140.22    .714E+04      11.3          0.76      10.55
        0.77   140.31    .919E+04      15.7          0.82       9.77
        0.85   140.39    .115E+05      21.0          0.88       9.11
        0.94   140.48    .141E+05      27.4          0.94       8.54
        1.02   140.56    .169E+05      34.6          0.99       8.12
        1.11   140.65    .205E+05      41.1          0.97       8.32
        1.19   140.74    .248E+05      51.5          1.00       8.02
        1.28   140.82    .296E+05      64.0          1.04       7.70
        1.36   140.91    .348E+05      78.0          1.08       7.44
        1.45   140.99    .407E+05      93.6          1.11       7.24
        1.53   141.08    .472E+05     111.7          1.14       7.05
        1.62   141.16    .545E+05     132.2          1.17       6.87

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50080)  314.94    17.03    6.00  60.07      0.79      0.84
    OUTFLOW: ID= 1 ( 60080)  314.94    13.67    6.17  60.07      0.73      0.79


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40090)|   Area    (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.99         3.46
     Dep. Storage     (mm)=       2.00         9.68
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     172.19        99.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=     111.66        57.53
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       2.84 (ii)   21.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.28         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.19         0.32          0.376 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25          6.00
     RUNOFF VOLUME    (mm)=      82.74        40.13         45.99
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.47          0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40090):     4.45    0.376     6.00    45.99
     + ID2= 2 ( 60080):   314.94   13.667     6.17    60.07
       ====================================================
       ID = 3 ( 50090):   319.39   13.996     6.17    59.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         138.71        0.0450
                  4.00         136.97        0.0450
                 28.00         135.94        0.0450
                 32.00         135.79        0.0350      Main Channel
                 36.00         135.23        0.0350      Main Channel
                 40.00         135.71    0.0350 /0.0450  Main Channel
                 54.00         136.96        0.0450
                 80.00         138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   135.39    .631E+02       0.1          0.44      12.42
        0.31   135.55    .253E+03       0.5          0.69       7.83
        0.47   135.71    .568E+03       1.6          0.91       5.97
        0.65   135.89    .114E+04       4.2          1.20       4.52
        0.84   136.07    .209E+04       8.7          1.35       4.02
        1.02   136.25    .342E+04      15.4          1.47       3.70
        1.20   136.44    .511E+04      24.8          1.58       3.44
        1.38   136.62    .718E+04      37.2          1.69       3.21
        1.57   136.80    .962E+04      53.1          1.79       3.02
        1.75   136.98    .124E+05      72.7          1.90       2.85
        1.93   137.17    .155E+05      97.8          2.05       2.64
        2.11   137.35    .188E+05     127.1          2.20       2.47
        2.30   137.53    .223E+05     160.4          2.34       2.31
        2.48   137.71    .259E+05     197.8          2.48       2.19
        2.66   137.90    .298E+05     239.5          2.61       2.07
        2.85   138.08    .339E+05     285.4          2.74       1.98
        3.03   138.26    .381E+05     335.6          2.86       1.89
        3.21   138.44    .426E+05     390.3          2.98       1.82
        3.39   138.63    .472E+05     449.4          3.10       1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50090)  319.39    14.00    6.17  59.87      0.98      1.44
    OUTFLOW: ID= 1 ( 60100)  319.39    13.64    6.17  59.87      0.97      1.43


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.46        14.44
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     423.45       125.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     111.66        67.86
                   over (min)       5.00        30.00
     Storage Coeff.  (min)=       5.72 (ii)   25.17 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.20         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.37         1.42          4.115 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33          6.00
     RUNOFF VOLUME    (mm)=      82.74        48.95         63.28
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.58          0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40100):    26.90    4.115     6.00    63.28
     + ID2= 2 ( 60100):   319.39   13.636     6.17    59.87
       ====================================================
       ID = 3 ( 50110):   346.28   15.790     6.17    60.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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```
| CALIB            |
| NASHYD   ( 40120)|   Area     (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

     Unit Hyd Qpeak  (cms)=   3.961

     PEAK FLOW       (cms)=   3.434 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  43.099
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.509

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB            |
| NASHYD   ( 40130)|   Area     (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

     Unit Hyd Qpeak  (cms)=   4.875

     PEAK FLOW       (cms)=   4.705 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  45.714
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.539

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40120):    44.60   3.434     6.33    43.10
      + ID2= 2 ( 40130):    63.82   4.705     6.42    45.71
        ================================================
        ID = 3 ( 50130):   108.42   8.120     6.33    44.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         155.27        0.0450
                   2.00         155.23        0.0450
                   4.00         155.21        0.0450
                   6.00         155.08        0.0450
                   8.00         154.94        0.0450
                  10.00         154.68        0.0450
                  12.00         154.21        0.0450
                  14.00         153.90        0.0450
                  16.00         153.41        0.0350      Main Channel
                  18.00         153.58        0.0350      Main Channel
                  20.00         153.72    0.0350 /0.0450  Main Channel
                  22.00         153.77        0.0450
                  24.00         153.77        0.0450
                  26.00         153.82        0.0450
                  28.00         153.79        0.0450
                  30.00         153.87        0.0450
                  32.00         153.99        0.0450
                  34.00         154.44        0.0450
                  36.00         154.86        0.0450
                  40.00         155.37        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.10   153.50    .107E+03       0.0         0.27      87.23
       0.20   153.60    .429E+03       0.1         0.42      55.65
       0.29   153.70    .991E+03       0.4         0.55      42.98
       0.39   153.80    .201E+04       0.9         0.66      35.52
       0.49   153.90    .408E+04       2.1         0.71      33.15
       0.59   153.99    .651E+04       3.7         0.81      29.01
       0.69   154.09    .916E+04       6.1         0.93      25.22
       0.79   154.19    .120E+05       8.9         1.05      22.39
       0.88   154.29    .149E+05      12.3         1.16      20.20
       0.98   154.39    .179E+05      16.2         1.27      18.49
       1.08   154.49    .211E+05      20.5         1.37      17.13
       1.18   154.58    .244E+05      25.4         1.47      16.02
       1.28   154.68    .278E+05      30.7         1.56      15.10
       1.37   154.78    .314E+05      36.4         1.63      14.38
       1.47   154.88    .351E+05      42.5         1.71      13.77
       1.57   154.98    .391E+05      48.9         1.76      13.33
       1.67   155.07    .433E+05      55.6         1.81      12.98
       1.77   155.17    .478E+05      63.0         1.86      12.65
       1.86   155.27    .528E+05      69.8         1.86      12.62

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42    8.12    6.33   44.64      0.76      1.01
   OUTFLOW: ID= 1 ( 60130)  108.42    6.40    6.67   44.63      0.70      0.94
```

```
| CALIB            |
| STANDHYD ( 40140)|   Area     (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      46.69         19.07
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     662.12         66.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     111.66        102.88
                   over (min)      10.00         20.00
     Storage Coeff.  (min)=       7.65 (ii)    19.38 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.13          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=      10.61          2.85        12.637 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      82.74         49.08         69.61
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.58          0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76  12.637     6.00    69.61
      + ID2= 2 ( 60130):   108.42   6.395     6.67    44.63
        ================================================
        ID = 3 ( 50180):   174.18  14.125     6.08    54.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40180)|   Area     (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
```

```
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.55          3.33
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       1.00          1.00
     Length            (m)=     304.26         66.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     111.66         80.63
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       5.19 (ii)    19.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.21          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.03          0.38          3.299 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      82.74         45.63         72.72
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.54          0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40190)|   Area     (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.74          8.05
     Dep. Storage     (mm)=       2.00          8.12
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     303.13        131.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     111.66         47.28
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       3.98 (ii)    26.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.24          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.63          0.62          1.936 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33          6.00
     RUNOFF VOLUME    (mm)=      82.74         40.68         56.93
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.48          0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         155.90        0.0450
                   1.00         154.69        0.0450
                   2.00         154.30        0.0450
                   3.00         154.00    0.0450 /0.0350  Main Channel
                   4.00         153.74        0.0350      Main Channel
                   5.00         153.51        0.0350      Main Channel
                   6.00         153.46        0.0350      Main Channel
                   7.00         153.77        0.0350      Main Channel
                   8.00         154.10    0.0350 /0.0450  Main Channel
                   9.00         154.50        0.0450
                  10.00         154.84        0.0450
                  11.00         155.13        0.0450
                  12.00         155.26        0.0450
                  13.00         155.32        0.0450
                  14.00         155.42        0.0450
                  15.00         155.52        0.0450
                  16.00         155.62        0.0450
                  17.00         155.69        0.0450
                  18.00         155.76        0.0450
                  20.00         155.88        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.11   153.57    .445E+02       0.0         0.32      21.18
       0.22   153.68    .135E+03       0.2         0.51      13.45
       0.33   153.79    .262E+03       0.4         0.66      10.46
       0.43   153.89    .423E+03       0.8         0.79       8.73
       0.54   154.00    .616E+03       1.3         0.90       7.61
       0.68   154.14    .900E+03       2.4         1.09       6.30
       0.81   154.27    .123E+04       3.8         1.27       5.40
       0.95   154.41    .160E+04       5.5         1.42       4.83
       1.08   154.54    .201E+04       7.6         1.55       4.43
       1.22   154.68    .246E+04       9.9         1.67       4.12
       1.35   154.81    .294E+04      12.7         1.78       3.86
       1.48   154.94    .345E+04      15.8         1.88       3.65
       1.62   155.08    .400E+04      19.2         1.97       3.48
       1.75   155.21    .458E+04      22.9         2.05       3.34
       1.89   155.35    .524E+04      26.8         2.11       3.26
       2.02   155.48    .599E+04      31.4         2.16       3.18
       2.16   155.62    .682E+04      36.5         2.20       3.12
       2.29   155.75    .774E+04      41.9         2.23       3.08
       2.43   155.89    .878E+04      48.0         2.25       3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     1.94    6.00   56.93      0.62      1.00
   OUTFLOW: ID= 1 ( 60190)   13.78     1.65    6.00   56.93      0.58      0.95
```

```
| CALIB            |
| STANDHYD ( 40200)|   Area     (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      17.41          5.53
     Dep. Storage     (mm)=       2.00          6.75
     Average Slope     (%)=       3.00          3.00
     Length            (m)=     391.08        150.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     111.66         58.47
                   over (min)       5.00         25.00
     Storage Coeff.  (min)=       4.34 (ii)    23.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.23          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.21          0.50          5.508 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25          6.00
     RUNOFF VOLUME    (mm)=      82.74         43.39         72.80
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.51          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
 ---------------------
 | ADD HYD  ( 50200)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40180):    13.89   3.299     6.00    72.72
       + ID2= 2 ( 40200):    22.94   5.508     6.00    72.80
         ====================================================
         ID = 3 ( 50200):    36.83   8.807     6.00    72.77

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  ( 50200)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 ( 50200):    36.83   8.807     6.00    72.77
       + ID2= 2 ( 60190):    13.78   1.651     6.00    56.93
         ====================================================
         ID = 1 ( 50200):    50.61  10.458     6.00    68.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 ---------------------
 | CALIB             |
 | STANDHYD ( 40210)|   Area    (ha)=   6.07
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
 ---------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.01         1.06
      Dep. Storage     (mm)=       2.00         6.27
      Average Slope     (%)=       0.90         0.90
      Length            (m)=     201.21       118.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     111.66        49.71
                  over (min)        5.00        30.00
      Storage Coeff.  (min)=       4.18 (ii)   28.99 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.24         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.51         0.08          1.555 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      82.74        43.19         75.52
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.51          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  ( 50210)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40210):     6.07   1.555     6.00    75.52
       + ID2= 2 ( 50200):    50.61  10.458     6.00    68.46
         ====================================================
         ID = 3 ( 50210):    56.68  12.012     6.00    69.21

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 ---------------------
 | ROUTE CHN( 60210)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         152.62        0.0450
                    7.00         152.39        0.0450
                    8.00         152.02        0.0450
                    9.00         151.48        0.0450
                   10.00         151.01        0.0450
                   11.00         150.56    0.0450 /0.0350  Main Channel
                   12.00         150.38        0.0350      Main Channel
                   13.00         150.40        0.0350      Main Channel
                   14.00         150.36        0.0350      Main Channel
                   15.00         150.60    0.0350 /0.0450  Main Channel
                   16.00         150.99        0.0450
                   17.00         151.50        0.0450
                   18.00         151.91        0.0450
                   19.00         152.65        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)       (cms)        (m/s)      (min)
        0.10    150.46    .580E+02        0.1          0.30      17.06
        0.20    150.56    .160E+03        0.3          0.48      10.57
        0.32    150.68    .314E+03        0.7          0.70       7.18
        0.44    150.80    .489E+03        1.4          0.89       5.71
        0.56    150.92    .686E+03        2.3          1.03       4.89
        0.69    151.04    .904E+03        3.5          1.16       4.35
        0.81    151.16    .114E+04        4.8          1.28       3.95
        0.93    151.29    .140E+04        6.4          1.38       3.66
        1.05    151.41    .167E+04        8.1          1.48       3.42
        1.17    151.53    .196E+04       10.1          1.57       3.22
        1.29    151.65    .227E+04       12.3          1.65       3.06
        1.41    151.77    .260E+04       14.8          1.73       2.93
        1.54    151.89    .295E+04       17.5          1.80       2.81
        1.66    152.01    .331E+04       20.4          1.87       2.70
        1.78    152.13    .369E+04       23.6          1.94       2.61
        1.90    152.26    .409E+04       27.0          2.00       2.52
        2.02    152.38    .451E+04       30.7          2.06       2.45
        2.14    152.50    .500E+04       33.4          2.03       2.49
        2.26    152.62    .563E+04       37.3          2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50210)   56.68    12.01    6.00  69.21      1.27      1.64
   OUTFLOW: ID= 1 ( 60210)   56.68    11.53    6.00  69.21      1.25      1.62


 ------------------------------------------------------------------------------
 ---------------------
 | CALIB             |
 | STANDHYD ( 40220)|   Area    (ha)=  11.32
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
 ---------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.91         2.40
      Dep. Storage     (mm)=       2.00         6.17
      Average Slope     (%)=       0.60         0.60
      Length            (m)=     274.66        79.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     111.66        50.95
                  over (min)        5.00        30.00
      Storage Coeff.  (min)=       5.69 (ii)   27.50 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.20         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.60         0.20          2.701 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      82.74        43.98         74.12
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.52          0.87


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  ( 50120)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40220):    11.32   2.701     6.00    74.12
       + ID2= 2 ( 60210):    56.68  11.532     6.00    69.21
         ====================================================
         ID = 3 ( 50120):    68.00  14.233     6.00    70.03

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------

 ---------------------
 | ADD HYD  ( 50140)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 ---------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 50120):    68.00  14.233     6.00    70.03
       + ID2= 2 ( 50180):   174.18  14.125     6.08    54.06
         ====================================================
         ID = 3 ( 50140):   242.18  28.289     6.00    58.55

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 ---------------------
 | ROUTE CHN( 60140)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         152.29        0.0450
                    2.00         152.20        0.0450
                    4.00         152.17        0.0450
                    6.00         152.15        0.0450
                    8.00         151.78        0.0450
                   10.00         151.28        0.0450
                   12.00         150.79        0.0450
                   14.00         150.20    0.0450 /0.0350  Main Channel
                   16.00         149.82        0.0350      Main Channel
                   18.00         149.51        0.0350      Main Channel
                   20.00         149.24        0.0350      Main Channel
                   22.00         149.48        0.0350      Main Channel
                   24.00         150.00    0.0350 /0.0450  Main Channel
                   26.00         150.52        0.0450
                   28.00         151.14        0.0450
                   30.00         151.68        0.0450
                   32.00         152.11        0.0450
                   34.00         152.20        0.0450
                   35.00         152.27        0.0450
                   38.00         152.30        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)       (cms)        (m/s)      (min)
        0.15    149.39    .694E+02        0.1          0.32      19.63
        0.31    149.54    .273E+03        0.4          0.53      11.92
        0.46    149.70    .577E+03        1.1          0.72       8.87
        0.61    149.85    .972E+03        2.2          0.87       7.30
        0.76    150.00    .145E+04        3.9          1.01       6.26
        0.93    150.16    .205E+04        6.4          1.18       5.36
        1.09    150.33    .274E+04        9.9          1.37       4.62
        1.25    150.49    .350E+04       14.2          1.54       4.11
        1.42    150.65    .434E+04       19.3          1.69       3.75
        1.58    150.82    .524E+04       25.2          1.83       3.47
        1.74    150.98    .621E+04       31.8          1.95       3.26
        1.91    151.14    .726E+04       39.2          2.06       3.09
        2.07    151.31    .839E+04       47.5          2.16       2.94
        2.23    151.47    .959E+04       56.6          2.25       2.82
        2.40    151.63    .109E+05       66.7          2.34       2.72
        2.56    151.80    .122E+05       77.6          2.41       2.63
        2.72    151.96    .137E+05       89.3          2.48       2.55
        2.89    152.12    .153E+05      102.0          2.55       2.49
        3.05    152.29    .172E+05      111.6          2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)   242.18    28.29    6.00  58.55      1.66      1.88
   OUTFLOW: ID= 1 ( 60140)   242.18    26.32    6.08  58.55      1.60      1.85


 ------------------------------------------------------------------------------
 ---------------------
 | ROUTE CHN( 60150)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 ---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         151.02        0.0450
                    2.00         150.89        0.0450
                    4.00         150.73        0.0450
                    6.00         150.65        0.0450
                    8.00         150.38        0.0450
                   10.00         149.93        0.0450
                   12.00         149.51        0.0450
                   14.00         149.02    0.0450 /0.0350  Main Channel
                   16.00         148.64        0.0350      Main Channel
                   18.00         148.27        0.0350      Main Channel
                   20.00         148.39        0.0350      Main Channel
                   22.00         148.60        0.0350      Main Channel
                   24.00         148.94    0.0350 /0.0450  Main Channel
                   26.00         149.34        0.0450
                   28.00         149.66        0.0450
                   30.00         150.12        0.0450
                   32.00         150.45        0.0450
                   34.00         150.52        0.0450
                   36.00         150.60        0.0450
                   38.00         150.60        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)       (cms)        (m/s)      (min)
        0.11    148.38    .283E+02        0.0          0.26      13.34
        0.22    148.49    .107E+03        0.2          0.44       7.98
        0.34    148.60    .226E+03        0.6          0.58       6.07
        0.45    148.72    .380E+03        1.3          0.72       4.90
        0.56    148.83    .563E+03        2.2          0.84       4.20
        0.67    148.94    .775E+03        3.5          0.95       3.72
        0.80    149.07    .105E+04        5.5          1.11       3.17
        0.93    149.20    .136E+04        8.2          1.27       2.77
        1.06    149.32    .170E+04       11.3          1.41       2.50
        1.18    149.45    .207E+04       14.9          1.52       2.31
        1.31    149.58    .248E+04       19.1          1.63       2.17
        1.44    149.71    .292E+04       23.8          1.72       2.05
        1.57    149.83    .340E+04       29.1          1.81       1.95
        1.70    149.96    .391E+04       34.9          1.89       1.87
        1.82    150.09    .445E+04       41.4          1.97       1.79
        1.95    150.22    .502E+04       48.4          2.04       1.73
        2.08    150.35    .563E+04       56.0          2.10       1.67
        2.21    150.47    .628E+04       63.9          2.15       1.64
        2.33    150.60    .702E+04       71.1          2.14       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60140)   242.18    26.32    6.08  58.55      1.50      1.76
   OUTFLOW: ID= 1 ( 60150)   242.18    26.70    6.08  58.55      1.51      1.77


 ------------------------------------------------------------------------------
 ---------------------
 | CALIB             |
 | STANDHYD ( 40150)|   Area    (ha)=   5.37
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
 ---------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.11         2.26
      Dep. Storage     (mm)=       2.00         6.34
      Average Slope     (%)=       2.30         2.30
      Length            (m)=     189.18        45.00
      Mannings n           =      0.015        0.290
```

```
18055>
18056>      Max.Eff.Inten.(mm/hr)=     111.66        86.95
18057>                   over (min)        5.00        15.00
18058>      Storage Coeff.  (min)=        3.04 (ii)   11.44 (ii)
18059>      Unit Hyd. Tpeak (min)=        5.00        15.00
18060>      Unit Hyd. peak  (cms)=        0.27         0.09
18061>                                                          *TOTALS*
18062>      PEAK FLOW       (cms)=        0.86         0.35          1.177 (iii)
18063>      TIME TO PEAK    (hrs)=        6.00         6.08           6.00
18064>      RUNOFF VOLUME    (mm)=       82.74        46.36          65.32
18065>      TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
18066>      RUNOFF COEFFICIENT   =        0.98         0.55           0.77
18067>
18068> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
18069>
18070>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18071>            CN*  =  80.0    Ia = Dep. Storage  (Above)
18072>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18073>            THAN THE STORAGE COEFFICIENT.
18074>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18075>
18076> --------------------------------------------------------------------------------
18077>
18078> --------------------
18079> | ADD HYD  ( 50160)|
18080> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
18081> --------------------         (ha)     (cms)    (hrs)     (mm)
18082>        ID1= 1 ( 40150):     5.37   1.177     6.00    65.32
18083>      + ID2= 2 ( 60150):   242.18  26.702     6.08    58.55
18084>        ====================================================
18085>        ID = 3 ( 50160):   247.54  27.319     6.08    58.69
18086>
18087>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18088> --------------------------------------------------------------------------------
18089> --------------------
18090> | CALIB              |
18091> | STANDHYD ( 40240)|   Area    (ha)=  10.28
18092> |ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
18093> --------------------
18094>                              IMPERVIOUS    PERVIOUS (i)
18095>      Surface Area     (ha)=       8.79         1.50
18096>      Dep. Storage     (mm)=       2.00         5.70
18097>      Average Slope     (%)=       3.40         3.40
18098>      Length            (m)=     261.85        70.00
18099>      Mannings n           =      0.015        0.270
18100>
18101>      Max.Eff.Inten.(mm/hr)=     111.66        76.00
18102>                   over (min)        5.00        10.00
18103>      Storage Coeff.  (min)=        3.29 (ii)    7.45 (ii)
18104>      Unit Hyd. Tpeak (min)=        5.00        10.00
18105>      Unit Hyd. peak  (cms)=        0.27         0.13
18106>                                                          *TOTALS*
18107>      PEAK FLOW       (cms)=        2.69         0.25          2.941 (iii)
18108>      TIME TO PEAK    (hrs)=        6.00         6.00           6.00
18109>      RUNOFF VOLUME    (mm)=       82.74        44.25          76.92
18110>      TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
18111>      RUNOFF COEFFICIENT   =        0.98         0.52           0.91
18112>
18113> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
18114>
18115>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18116>            CN*  =  79.6    Ia = Dep. Storage  (Above)
18117>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18118>            THAN THE STORAGE COEFFICIENT.
18119>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18120>
18121> --------------------------------------------------------------------------------
18122> --------------------
18123> | CALIB              |
18124> | STANDHYD ( 40250)|   Area    (ha)=  13.36
18125> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
18126> --------------------
18127>                              IMPERVIOUS    PERVIOUS (i)
18128>      Surface Area     (ha)=       8.61         4.75
18129>      Dep. Storage     (mm)=       2.00         7.14
18130>      Average Slope     (%)=       2.00         2.00
18131>      Length            (m)=     298.43        70.00
18132>      Mannings n           =      0.015        0.320
18133>
18134>      Max.Eff.Inten.(mm/hr)=     111.66        69.17
18135>                   over (min)        5.00        20.00
18136>      Storage Coeff.  (min)=        4.17 (ii)   17.44 (ii)
18137>      Unit Hyd. Tpeak (min)=        5.00        20.00
18138>      Unit Hyd. peak  (cms)=        0.24         0.06
18139>                                                          *TOTALS*
18140>      PEAK FLOW       (cms)=        2.56         0.49          2.906 (iii)
18141>      TIME TO PEAK    (hrs)=        6.00         6.17           6.00
18142>      RUNOFF VOLUME    (mm)=       82.74        42.19          67.69
18143>      TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
18144>      RUNOFF COEFFICIENT   =        0.98         0.50           0.80
18145>
18146> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
18147>
18148>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18149>            CN*  =  78.7    Ia = Dep. Storage  (Above)
18150>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18151>            THAN THE STORAGE COEFFICIENT.
18152>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18153>
18154> --------------------------------------------------------------------------------
18155> --------------------
18156> | ROUTE CHN( 60240)|
18157> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
18158> --------------------
18159>                <------ DATA FOR SECTION (   1.1) ------>
18160>                Distance      Elevation       Manning
18161>                    0.00        155.56        0.0450
18162>                    2.00        155.23        0.0450
18163>                    4.00        154.58        0.0450
18164>                    6.00        153.92        0.0450
18165>                    8.00        153.53        0.0450
18166>                   10.00        152.64        0.0450
18167>                   12.00        152.43    0.0450 /0.0350  Main Channel
18168>                   14.00        152.24        0.0350      Main Channel
18169>                   16.00        152.07        0.0350      Main Channel
18170>                   18.00        152.30    0.0350 /0.0450  Main Channel
18171>                   20.00        152.46        0.0450
18172>                   22.00        155.55        0.0450
18173>
18174>       <--------------------- TRAVEL TIME TABLE ---------------------->
18175>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
18176>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
18177>        0.12   152.18    .895E+02       0.1         0.43      24.33
18178>        0.24   152.30    .356E+03       0.4         0.69      15.20
18179>        0.43   152.49    .118E+04       2.1         1.10       9.55
18180>        0.62   152.68    .234E+04       5.5         1.48       7.09
18181>        0.81   152.88    .361E+04      10.4         1.83       5.76
18182>        1.00   153.07    .494E+04      16.7         2.13       4.94
18183>        1.19   153.26    .634E+04      24.2         2.40       4.38
18184>        1.38   153.45    .781E+04      32.8         2.65       3.97
18185>        1.58   153.64    .936E+04      42.5         2.86       3.67
18186>        1.77   153.83    .110E+05      53.3         3.05       3.45
18187>        1.96   154.02    .128E+05      65.6         3.23       3.26
18188>        2.15   154.21    .147E+05      79.4         3.40       3.09
18189>        2.34   154.40    .167E+05      94.5         3.57       2.95
18190>        2.53   154.60    .188E+05     111.0         3.73       2.82
18191>        2.72   154.79    .209E+05     128.7         3.89       2.71
18192>        2.91   154.98    .231E+05     147.8         4.03       2.61
18193>        3.10   155.17    .255E+05     168.3         4.17       2.52
18194>        3.30   155.36    .279E+05     189.2         4.28       2.46
18195>        3.49   155.55    .305E+05     211.3         4.38       2.40
18196>
18197>                                    <---- hydrograph ---->   <-pipe / channel->
18198>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
18199>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
18200>    INFLOW : ID= 2 ( 40250)   13.36     2.91    6.00  67.69      0.48      1.18
18201>    OUTFLOW: ID= 1 ( 60240)   13.36     2.35    6.00  67.68      0.44      1.13
18202>
18203>
18204>
18205> --------------------------------------------------------------------------------
18206>
18207> --------------------
18208> | ADD HYD  ( 50250)|
18209> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
18210> --------------------         (ha)     (cms)    (hrs)     (mm)
18211>        ID1= 1 ( 40240):    10.28   2.941     6.00    76.92
18212>      + ID2= 2 ( 50160):   247.54  27.319     6.08    58.69
18213>        ====================================================
18214>        ID = 3 ( 50250):   257.83  28.429     6.08    59.42
18215>
18216>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18217> --------------------------------------------------------------------------------
18218>
18219> --------------------
18220> | ADD HYD  ( 50250)|
18221> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
18222> --------------------         (ha)     (cms)    (hrs)     (mm)
18223>        ID1= 3 ( 50250):   257.83  28.429     6.08    59.42
18224>      + ID2= 2 ( 60240):    13.36   2.348     6.00    67.68
18225>        ====================================================
18226>        ID = 1 ( 50250):   271.19  30.648     6.00    59.83
18227>
18228>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18229> --------------------------------------------------------------------------------
18230> --------------------
18231> | ROUTE CHN( 60250)|
18232> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
18233> --------------------
18234>                <------ DATA FOR SECTION (   1.1) ------>
18235>                Distance      Elevation       Manning
18236>                    0.00        149.47        0.0450
18237>                    3.00        149.39        0.0450
18238>                    6.00        149.18        0.0450
18239>                    9.00        148.85        0.0450
18240>                   12.00        148.60        0.0450
18241>                   15.00        148.16        0.0450
18242>                   18.00        147.81        0.0450
18243>                   21.00        147.50        0.0450
18244>                   24.00        147.26        0.0350      Main Channel
18245>                   27.00        146.88        0.0350      Main Channel
18246>                   30.00        146.72        0.0350      Main Channel
18247>                   33.00        147.27    0.0350 /0.0450  Main Channel
18248>                   36.00        147.60        0.0450
18249>                   39.00        147.71        0.0450
18250>                   42.00        148.10        0.0450
18251>                   45.00        148.90        0.0450
18252>                   48.00        149.05        0.0450
18253>                   51.00        149.12        0.0450
18254>                   54.00        149.43        0.0450
18255>                   57.00        149.67        0.0450
18256>
18257>       <--------------------- TRAVEL TIME TABLE ---------------------->
18258>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
18259>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
18260>        0.14   146.85    .156E+03       0.1         0.30      40.24
18261>        0.27   146.99    .583E+03       0.4         0.51      23.51
18262>        0.41   147.13    .119E+04       1.1         0.68      17.78
18263>        0.54   147.26    .198E+04       2.2         0.82      14.76
18264>        0.69   147.41    .309E+04       4.3         1.02      11.88
18265>        0.84   147.56    .455E+04       7.2         1.15      10.50
18266>        0.98   147.70    .637E+04      10.9         1.24       9.73
18267>        1.13   147.85    .862E+04      15.8         1.32       9.12
18268>        1.28   148.00    .111E+05      21.7         1.41       8.55
18269>        1.42   148.14    .139E+05      28.7         1.50       8.06
18270>        1.57   148.29    .169E+05      37.1         1.59       7.58
18271>        1.72   148.44    .200E+05      46.5         1.68       7.16
18272>        1.87   148.58    .233E+05      57.0         1.77       6.80
18273>        2.01   148.73    .268E+05      68.3         1.85       6.53
18274>        2.16   148.88    .305E+05      80.9         1.92       6.28
18275>        2.31   149.02    .345E+05      93.2         1.95       6.17
18276>        2.45   149.17    .391E+05     106.6         1.97       6.11
18277>        2.60   149.32    .441E+05     123.2         2.02       5.97
18278>        2.75   149.47    .495E+05     139.7         2.04       5.91
18279>
18280>                                    <---- hydrograph ---->   <-pipe / channel->
18281>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
18282>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
18283>    INFLOW : ID= 2 ( 50250)  271.19    30.65    6.00  59.83      1.46      1.52
18284>    OUTFLOW: ID= 1 ( 60250)  271.19    26.71    6.17  59.83      1.38      1.47
18285>
18286>
18287>
18288> --------------------------------------------------------------------------------
18289> --------------------
18290> | CALIB              |
18291> | STANDHYD ( 40260)|   Area    (ha)=  28.45
18292> |ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
18293> --------------------
18294>                              IMPERVIOUS    PERVIOUS (i)
18295>      Surface Area     (ha)=      15.93        12.52
18296>      Dep. Storage     (mm)=       2.00         6.70
18297>      Average Slope     (%)=       1.30         1.30
18298>      Length            (m)=     435.49        46.00
18299>      Mannings n           =      0.015        0.300
18300>
18301>      Max.Eff.Inten.(mm/hr)=     111.66       101.73
18302>                   over (min)        5.00        20.00
18303>      Storage Coeff.  (min)=        5.95 (ii)   15.63 (ii)
18304>      Unit Hyd. Tpeak (min)=        5.00        20.00
18305>      Unit Hyd. peak  (cms)=        0.19         0.07
18306>                                                          *TOTALS*
18307>      PEAK FLOW       (cms)=        3.59         1.93          4.979 (iii)
18308>      TIME TO PEAK    (hrs)=        6.00         6.17           6.00
18309>      RUNOFF VOLUME    (mm)=       82.74        47.75          62.80
18310>      TOTAL RAINFALL   (mm)=       84.74        84.74          84.74
18311>      RUNOFF COEFFICIENT   =        0.98         0.56           0.74
18312>
18313>
18314>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18315>            CN*  =  78.7    Ia = Dep. Storage  (Above)
18316>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18317>            THAN THE STORAGE COEFFICIENT.
18318>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18319>
18320> --------------------------------------------------------------------------------
18321>
18322> --------------------
18323> | ADD HYD  ( 50260)|
18324> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
18325> --------------------         (ha)     (cms)    (hrs)     (mm)
18326>        ID1= 1 ( 40260):    28.45   4.979     6.00    62.80
18327>      + ID2= 2 ( 60250):   271.19  26.713     6.17    59.83
18328>        ====================================================
18329>        ID = 3 ( 50260):   299.64  29.730     6.17    60.11
18330>
18331>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18332> --------------------------------------------------------------------------------
18333> --------------------
18334> | ROUTE CHN( 60260)|
18335> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
18336> --------------------
18337>                <------ DATA FOR SECTION (   1.1) ------>
18338>                Distance      Elevation       Manning
18339>                    0.00        143.17        0.0450
18340>                    4.00        143.15        0.0450
18341>                    8.00        143.14        0.0450
18342>                   12.00        142.95        0.0450
18343>                   16.00        142.87        0.0450
18344>                   20.00        142.67        0.0450
18345>                   24.00        142.24        0.0450
18346>                   28.00        141.84        0.0450
18347>                   32.00        141.61        0.0450
18348>                   36.00        141.32        0.0450
18349>                   40.00        140.98        0.0450
18350>                   44.00        140.88        0.0450
18351>                   48.00        139.95        0.0350      Main Channel
18352>                   52.00        140.09        0.0350      Main Channel
18353>                   56.00        141.11        0.0450
18354>                   60.00        141.43        0.0450
18355>                   76.00        143.21        0.0450
18356>
18357>       <--------------------- TRAVEL TIME TABLE ---------------------->
18358>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
18359>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
18360>        0.17   140.12    .479E+03       0.2         0.48      36.89
```

```
18361>        0.34   140.29    .147E+04       1.2          0.86      20.63
18362>        0.51   140.46    .272E+04       2.9          1.12      15.78
18363>        0.68   140.63    .421E+04       5.3          1.33      13.28
18364>        0.85   140.80    .596E+04       8.5          1.51      11.69
18365>        1.02   140.97    .812E+04      12.0          1.56      11.29
18366>        1.19   141.14    .111E+05      17.6          1.68      10.52
18367>        1.36   141.31    .147E+05      25.4          1.83       9.67
18368>        1.53   141.48    .191E+05      34.9          1.93       9.14
18369>        1.70   141.65    .242E+05      46.4          2.03       8.71
18370>        1.87   141.81    .301E+05      59.9          2.11       8.38
18371>        2.04   141.98    .367E+05      76.6          2.21       7.99
18372>        2.21   142.15    .439E+05      95.9          2.31       7.63
18373>        2.37   142.32    .517E+05     117.9          2.42       7.30
18374>        2.54   142.49    .600E+05     142.7          2.52       7.01
18375>        2.71   142.66    .689E+05     170.3          2.62       6.74
18376>        2.88   142.83    .785E+05     198.2          2.68       6.60
18377>        3.05   143.00    .892E+05     225.9          2.68       6.58
18378>        3.22   143.17    .101E+06     250.7          2.63       6.73
18379>
18380>                                    <---- hydrograph ---->   <-pipe / channel->
18381>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
18382>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
18383>    INFLOW : ID= 2 ( 50260)  299.64    29.73    6.17  60.11      1.43      1.87
18384>    OUTFLOW: ID= 1 ( 60260)  299.64    26.54    6.25  60.11      1.38      1.84
18385>
18386>
18387>
18388> ------------------------------------------------------------------------------
18389> --------------------
18390> | CALIB            |
18391> | STANDHYD ( 40270)|   Area    (ha)=   9.83
18392> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
18393> --------------------
18394>                              IMPERVIOUS    PERVIOUS (i)
18395>      Surface Area     (ha)=       3.12         6.71
18396>      Dep. Storage     (mm)=       2.00         8.03
18397>      Average Slope     (%)=       1.10         1.10
18398>      Length            (m)=     256.01        73.00
18399>      Mannings n           =      0.015        0.330
18400>
18401>      Max.Eff.Inten.(mm/hr)=     111.66        68.38
18402>                over (min)        5.00        25.00
18403>      Storage Coeff.  (min)=       4.55 (ii)   21.21 (ii)
18404>      Unit Hyd. Tpeak (min)=       5.00        25.00
18405>      Unit Hyd. peak  (cms)=       0.23         0.05
18406>                                                      *TOTALS*
18407>      PEAK FLOW       (cms)=       0.66         0.74          1.100 (iii)
18408>      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
18409>      RUNOFF VOLUME    (mm)=      82.74        46.10          54.17
18410>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
18411>      RUNOFF COEFFICIENT   =       0.98         0.54           0.64
18412>
18413> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
18414>
18415>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18416>            CN*  =  80.7    Ia = Dep. Storage  (Above)
18417>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18418>            THAN THE STORAGE COEFFICIENT.
18419>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18420>
18421> ------------------------------------------------------------------------------
18422>
18423> --------------------
18424> | ADD HYD  ( 50270)|
18425> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
18426> --------------------         (ha)    (cms)    (hrs)     (mm)
18427>        ID1= 1 ( 40270):     9.83   1.100     6.00    54.17
18428>      + ID2= 2 ( 60260):   299.64  26.538     6.25    60.11
18429>        ====================================================
18430>        ID = 3 ( 50270):   309.47  27.392     6.25    59.92
18431>
18432>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18433> ------------------------------------------------------------------------------
18434> --------------------
18435> | CALIB            |
18436> | STANDHYD ( 40280)|   Area    (ha)=  31.30
18437> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
18438> --------------------
18439>                              IMPERVIOUS    PERVIOUS (i)
18440>      Surface Area     (ha)=      20.16        11.14
18441>      Dep. Storage     (mm)=       2.00         7.27
18442>      Average Slope     (%)=       1.10         1.10
18443>      Length            (m)=     456.83        53.00
18444>      Mannings n           =      0.015        0.310
18445>
18446>      Max.Eff.Inten.(mm/hr)=     111.66        98.38
18447>                over (min)        5.00        20.00
18448>      Storage Coeff.  (min)=       6.44 (ii)   17.89 (ii)
18449>      Unit Hyd. Tpeak (min)=       5.00        20.00
18450>      Unit Hyd. peak  (cms)=       0.18         0.06
18451>                                                      *TOTALS*
18452>      PEAK FLOW       (cms)=       4.69         1.64          5.858 (iii)
18453>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
18454>      RUNOFF VOLUME    (mm)=      82.74        46.35          65.15
18455>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
18456>      RUNOFF COEFFICIENT   =       0.98         0.55           0.77
18457>
18458>
18459>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18460>            CN*  =  76.8    Ia = Dep. Storage  (Above)
18461>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18462>            THAN THE STORAGE COEFFICIENT.
18463>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18464>
18465> ------------------------------------------------------------------------------
18466>
18467> --------------------
18468> | ADD HYD  ( 50280)|
18469> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
18470> --------------------         (ha)    (cms)    (hrs)     (mm)
18471>        ID1= 1 ( 40280):    31.30   5.858     6.00    65.15
18472>      + ID2= 2 ( 50270):   309.47  27.392     6.25    59.92
18473>        ====================================================
18474>        ID = 3 ( 50280):   340.77  30.048     6.25    60.40
18475>
18476>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18477> ------------------------------------------------------------------------------
18478> --------------------
18479> | ROUTE CHN( 60280)|
18480> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
18481> --------------------
18482>               <------ DATA FOR SECTION (   1.1) ------>
18483>               Distance      Elevation       Manning
18484>                   0.00        139.35        0.0450
18485>                   3.00        139.19        0.0450
18486>                   6.00        138.46        0.0450
18487>                  27.00        137.71        0.0450
18488>                  30.00        137.44        0.0350      Main Channel
18489>                  33.00        137.26        0.0350      Main Channel
18490>                  36.00        137.51        0.0350      Main Channel
18491>                  39.00        137.64    0.0350 /0.0450  Main Channel
18492>                  42.00        137.71        0.0450
18493>                  57.00        139.35        0.0450
18494>
18495>       <---------------------- TRAVEL TIME TABLE ---------------------->
18496>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
18497>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
18498>         0.09   137.35    .361E+02        0.0          0.30      17.09
18499>         0.18   137.44    .145E+03        0.2          0.48      10.76
18500>         0.30   137.55    .369E+03        0.8          0.68       7.57
18501>         0.41   137.67    .717E+03        1.9          0.82       6.28
18502>         0.52   137.78    .124E+04        3.9          0.97       5.27
18503>         0.63   137.89    .192E+04        6.8          1.10       4.67
18504>         0.74   138.00    .273E+04       10.7          1.20       4.25
18505>         0.86   138.11    .369E+04       15.7          1.30       3.93
18506>         0.97   138.23    .480E+04       21.8          1.39       3.67
18507>         1.08   138.34    .605E+04       29.1          1.48       3.46
18508>         1.19   138.45    .745E+04       37.8          1.56       3.28
18509>         1.31   138.56    .895E+04       48.6          1.67       3.07
18510>         1.42   138.68    .105E+05       60.8          1.78       2.88
18511>         1.53   138.79    .121E+05       74.4          1.89       2.71
18512>         1.64   138.90    .138E+05       89.3          1.99       2.57
18513>         1.76   139.01    .155E+05      105.5          2.10       2.44
18514>         1.87   139.13    .172E+05      123.0          2.19       2.33
18515>         1.98   139.24    .190E+05      140.8          2.27       2.25
18516>         2.09   139.35    .209E+05      159.0          2.33       2.20
18517>
18518>                                    <---- hydrograph ---->   <-pipe / channel->
18519>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
18520>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
18521>    INFLOW : ID= 2 ( 50280)  340.77    30.05    6.25  60.40      1.09      1.49
18522>    OUTFLOW: ID= 1 ( 60280)  340.77    29.54    6.25  60.40      1.09      1.48
18523>
18524>
18525>
18526> ------------------------------------------------------------------------------
18527> --------------------
18528> | CALIB            |
18529> | STANDHYD ( 40300)|   Area    (ha)=  11.53
18530> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
18531> --------------------
18532>                              IMPERVIOUS    PERVIOUS (i)
18533>      Surface Area     (ha)=       6.71         4.81
18534>      Dep. Storage     (mm)=       2.00         7.99
18535>      Average Slope     (%)=       1.60         1.60
18536>      Length            (m)=     277.19        63.00
18537>      Mannings n           =      0.015        0.340
18538>
18539>      Max.Eff.Inten.(mm/hr)=     111.66        92.52
18540>                over (min)        5.00        20.00
18541>      Storage Coeff.  (min)=       4.26 (ii)   16.56 (ii)
18542>      Unit Hyd. Tpeak (min)=       5.00        20.00
18543>      Unit Hyd. peak  (cms)=       0.23         0.06
18544>                                                      *TOTALS*
18545>      PEAK FLOW       (cms)=       1.58         0.69          2.064 (iii)
18546>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
18547>      RUNOFF VOLUME    (mm)=      82.74        44.74          61.83
18548>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
18549>      RUNOFF COEFFICIENT   =       0.98         0.53           0.73
18550>
18551> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
18552>
18553>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18554>            CN*  =  76.3    Ia = Dep. Storage  (Above)
18555>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18556>            THAN THE STORAGE COEFFICIENT.
18557>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18558>
18559> ------------------------------------------------------------------------------
18560>
18561> --------------------
18562> | ADD HYD  ( 50300)|
18563> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
18564> --------------------         (ha)    (cms)    (hrs)     (mm)
18565>        ID1= 1 ( 40300):    11.53   2.064     6.00    61.83
18566>      + ID2= 2 ( 60280):   340.77  29.538     6.25    60.40
18567>        ====================================================
18568>        ID = 3 ( 50300):   352.30  30.455     6.25    60.45
18569>
18570>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18571> ------------------------------------------------------------------------------
18572> --------------------
18573> | ROUTE CHN( 60300)|
18574> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
18575> --------------------
18576>               <------ DATA FOR SECTION (   1.1) ------>
18577>               Distance      Elevation       Manning
18578>                   0.00        137.26        0.0450
18579>                   4.00        136.94        0.0450
18580>                   8.00        136.82        0.0450
18581>                  12.00        136.69        0.0450
18582>                  16.00        136.55        0.0450
18583>                  36.00        135.52        0.0350      Main Channel
18584>                  64.00        136.21        0.0450
18585>                  75.00        136.49        0.0450
18586>                  84.00        137.21        0.0450
18587>
18588>       <---------------------- TRAVEL TIME TABLE ---------------------->
18589>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
18590>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
18591>         0.09   135.61    .491E+02        0.1          0.26      12.99
18592>         0.18   135.70    .196E+03        0.4          0.42       8.18
18593>         0.27   135.79    .442E+03        1.2          0.55       6.24
18594>         0.36   135.88    .785E+03        2.5          0.66       5.15
18595>         0.45   135.97    .123E+04        4.6          0.77       4.44
18596>         0.53   136.06    .177E+04        7.5          0.87       3.93
18597>         0.62   136.15    .240E+04       11.3          0.96       3.55
18598>         0.71   136.24    .314E+04       16.4          1.07       3.19
18599>         0.80   136.32    .397E+04       23.3          1.20       2.84
18600>         0.89   136.41    .490E+04       31.4          1.32       2.60
18601>         0.98   136.50    .592E+04       40.8          1.42       2.41
18602>         1.07   136.59    .701E+04       51.5          1.51       2.27
18603>         1.16   136.68    .816E+04       63.4          1.59       2.14
18604>         1.25   136.77    .938E+04       76.6          1.67       2.04
18605>         1.34   136.86    .107E+05       91.2          1.75       1.95
18606>         1.42   136.95    .120E+05      107.3          1.83       1.87
18607>         1.51   137.04    .135E+05      125.8          1.91       1.78
18608>         1.60   137.13    .149E+05      145.6          2.00       1.71
18609>         1.69   137.22    .164E+05      166.8          2.08       1.64
18610>
18611>                                    <---- hydrograph ---->   <-pipe / channel->
18612>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
18613>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
18614>    INFLOW : ID= 2 ( 50300)  352.30    30.46    6.25  60.45      0.88      1.30
18615>    OUTFLOW: ID= 1 ( 60300)  352.30    30.40    6.33  60.45      0.88      1.30
18616>
18617>
18618>
18619> ------------------------------------------------------------------------------
18620> --------------------
18621> | CALIB            |
18622> | STANDHYD ( 40290)|   Area    (ha)=   9.17
18623> |ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
18624> --------------------
18625>                              IMPERVIOUS    PERVIOUS (i)
18626>      Surface Area     (ha)=       2.77         6.39
18627>      Dep. Storage     (mm)=       2.00         8.38
18628>      Average Slope     (%)=       3.20         3.20
18629>      Length            (m)=     247.21        43.00
18630>      Mannings n           =      0.015        0.350
18631>
18632>      Max.Eff.Inten.(mm/hr)=     111.66        80.71
18633>                over (min)        5.00        15.00
18634>      Storage Coeff.  (min)=       3.23 (ii)   11.77 (ii)
18635>      Unit Hyd. Tpeak (min)=       5.00        15.00
18636>      Unit Hyd. peak  (cms)=       0.27         0.09
18637>                                                      *TOTALS*
18638>      PEAK FLOW       (cms)=       0.66         0.91          1.459 (iii)
18639>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
18640>      RUNOFF VOLUME    (mm)=      82.74        43.77          52.93
18641>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
18642>      RUNOFF COEFFICIENT   =       0.98         0.52           0.62
18643>
18644> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
18645>
18646>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
18647>            CN*  =  79.8    Ia = Dep. Storage  (Above)
18648>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
18649>            THAN THE STORAGE COEFFICIENT.
18650>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
18651>
18652> ------------------------------------------------------------------------------
18653>
18654> --------------------
18655> | ADD HYD  ( 50340)|
18656> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
18657> --------------------         (ha)    (cms)    (hrs)     (mm)
18658>        ID1= 1 ( 40290):     9.17   1.459     6.00    52.93
18659>      + ID2= 2 ( 60300):   352.30  30.398     6.33    60.45
18660>        ====================================================
18661>        ID = 3 ( 50340):   361.46  30.980     6.33    60.25
18662>
18663>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18664> ------------------------------------------------------------------------------
18665>
18666> --------------------
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| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   346.28  15.790     6.17    60.13
      + ID2= 2 ( 50340):   361.46  30.980     6.33    60.25
        ================================================
        ID = 3 ( 50350):   707.75  46.159     6.25    60.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         134.05        0.0450
                  24.00         133.67        0.0450
                  30.00         131.85        0.0450
                  36.00         131.42        0.0450
                  42.00         130.48        0.0450
                  48.00         130.42        0.0350      Main Channel
                  54.00         130.42        0.0350      Main Channel
                  60.00         130.62        0.0450
                  66.00         130.77        0.0450
                  72.00         131.03        0.0450
                  78.00         131.43        0.0450
                  84.00         131.38        0.0450
                  90.00         131.33        0.0450
                  96.00         131.98        0.0450
                 102.00         133.31        0.0450
                 120.00         133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   130.42    .133E+02        0.0         0.03     768.63
        0.19   130.61    .383E+04        1.6         0.61      40.07
        0.37   130.79    .994E+04        6.6         0.97      25.18
        0.56   130.98    .179E+05       15.1         1.23      19.81
        0.75   131.16    .272E+05       27.2         1.46      16.72
        0.93   131.35    .377E+05       42.2         1.64      14.88
        1.12   131.54    .521E+05       60.9         1.71      14.26
        1.30   131.72    .683E+05       87.2         1.86      13.07
        1.49   131.91    .857E+05      119.1         2.03      11.99
        1.68   132.09    .104E+06      157.8         2.22      10.96
        1.86   132.28    .122E+06      201.6         2.41      10.11
        2.05   132.47    .141E+06      250.1         2.59       9.41
        2.23   132.65    .160E+06      303.1         2.76       8.82
        2.42   132.84    .180E+06      360.6         2.93       8.32
        2.61   133.02    .200E+06      422.5         3.08       7.90
        2.79   133.21    .221E+06      488.7         3.24       7.53
        2.98   133.40    .242E+06      552.2         3.34       7.29
        3.16   133.58    .264E+06      613.6         3.40       7.17
        3.35   133.77    .288E+06      658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    46.16    6.25  60.20      0.97      1.65
   OUTFLOW: ID= 1 ( 60350)  707.75    40.61    6.50  60.19      0.91      1.61


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.280 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.466
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.80   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.117 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.428
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------

                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     111.66       245.59
                 over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.19 (ii)    2.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.30
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.18         0.30          0.481 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      82.74        68.58         73.68
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.81          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.15     0.00     0.00     0.00     0.00     0.15
        0.15     1.00     0.00     0.00     0.00     1.15
        0.15   100.00     0.00     0.00     0.00   100.15

                          AREA     QPEAK     TPEAK     R.V.
                          (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   1.62      0.48      6.00    73.68
     ================================================
     ID= 2  (   2)    :   1.23      0.15      6.00    73.68
     ID= 3  (   2)    :   0.39      0.33      6.00    73.68
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80   0.117     6.08    51.43
      + ID2= 2 (******):     1.23   0.154     6.00    73.68
        ================================================
        ID = 3 (******):     2.03   0.261     6.00    64.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22   0.280     6.08    51.47
      + ID2= 2 (******):     2.03   0.261     6.00    64.93
        ================================================
        ID = 3 (******):     4.25   0.500     6.08    57.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                          AREA     QPEAK     TPEAK     R.V.
                          (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   4.25      0.50      6.08    57.90
     ================================================
     ID= 2  (   2)    :   2.13      0.25      6.08    57.90
     ID= 3  (   2)    :   2.13      0.25      6.08    57.90
     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.03   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.142 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.448
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.142     6.08    51.45
      + ID2= 2 (******):     2.13   0.250     6.08    57.90
        ================================================
        ID = 3 (******):     3.16   0.392     6.08    55.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.097 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.348
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.097     6.00    51.35
      + ID2= 2 (******):     2.13   0.250     6.08    57.90
        ================================================
        ID = 3 (******):     2.74   0.347     6.08    56.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.083 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.398
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.049 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.109
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.603

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.049     6.00    51.11
      + ID2= 2 (******):     0.54   0.083     6.08    51.40
        ================================================
        ID = 3 (******):     0.80   0.128     6.00    51.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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18973>
18974> --------------------
18975> | ADD HYD  (******)|
18976> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
18977> --------------------         (ha)    (cms)    (hrs)     (mm)
18978>        ID1= 3 (******):     0.80   0.128     6.00    51.30
18979>      + ID2= 2 (******):     2.74   0.347     6.08    56.44
18980>        ====================================================
18981>        ID = 1 (******):     3.54   0.474     6.00    55.28
18982>
18983>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
18984> ------------------------------------------------------------------------------
18985> --------------------
18986> | CALIB            |
18987> | NASHYD   (******)|   Area    (ha)=   2.16   Curve Number   (CN)= 85.0
18988> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
18989> --------------------   U.H. Tp(hrs)=   0.26
18990>
18991>     Unit Hyd Qpeak  (cms)=   0.317
18992>
18993>     PEAK FLOW       (cms)=   0.281 (i)
18994>     TIME TO PEAK    (hrs)=   6.083
18995>     RUNOFF VOLUME    (mm)=  51.461
18996>     TOTAL RAINFALL   (mm)=  84.737
18997>     RUNOFF COEFFICIENT   =   0.607
18998>
18999>     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19000>
19001> ------------------------------------------------------------------------------
19002> --------------------
19003> | CALIB            |
19004> | NASHYD   (******)|   Area    (ha)=   1.01   Curve Number   (CN)= 85.0
19005> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
19006> --------------------   U.H. Tp(hrs)=   0.22
19007>
19008>     Unit Hyd Qpeak  (cms)=   0.175
19009>
19010>     PEAK FLOW       (cms)=   0.148 (i)
19011>     TIME TO PEAK    (hrs)=   6.083
19012>     RUNOFF VOLUME    (mm)=  51.428
19013>     TOTAL RAINFALL   (mm)=  84.737
19014>     RUNOFF COEFFICIENT   =   0.607
19015>
19016>     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19017>
19018> ------------------------------------------------------------------------------
19019> --------------------
19020> | CALIB            |
19021> | NASHYD   (******)|   Area    (ha)=   0.29   Curve Number   (CN)= 85.0
19022> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
19023> --------------------   U.H. Tp(hrs)=   0.17
19024>
19025>     Unit Hyd Qpeak  (cms)=   0.065
19026>
19027>     PEAK FLOW       (cms)=   0.048 (i)
19028>     TIME TO PEAK    (hrs)=   6.000
19029>     RUNOFF VOLUME    (mm)=  51.312
19030>     TOTAL RAINFALL   (mm)=  84.737
19031>     RUNOFF COEFFICIENT   =   0.606
19032>
19033>     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19034>
19035> ------------------------------------------------------------------------------
19036> --------------------
19037> | CALIB            |
19038> | STANDHYD (******)|   Area    (ha)=   3.63
19039> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
19040> --------------------
19041>                              IMPERVIOUS    PERVIOUS (i)
19042>     Surface Area     (ha)=       2.98         0.65
19043>     Dep. Storage     (mm)=       2.00         4.13
19044>     Average Slope     (%)=       1.00         2.00
19045>     Length            (m)=      30.00        30.00
19046>     Mannings n           =      0.013        0.025
19047>
19048>     Max.Eff.Inten.(mm/hr)=     111.66       350.13
19049>                   over (min)        5.00         5.00
19050>     Storage Coeff.  (min)=       1.19 (ii)    2.21 (ii)
19051>     Unit Hyd. Tpeak (min)=       5.00         5.00
19052>     Unit Hyd. peak  (cms)=       0.33         0.30
19053>                                                      *TOTALS*
19054>     PEAK FLOW       (cms)=       0.46         0.64          1.100 (iii)
19055>     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
19056>     RUNOFF VOLUME    (mm)=      82.74        72.52         76.71
19057>     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
19058>     RUNOFF COEFFICIENT   =       0.98         0.86          0.91
19059>
19060> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
19061>
19062>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
19063>           CN*  =  86.0    Ia = Dep. Storage  (Above)
19064>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
19065>           THAN THE STORAGE COEFFICIENT.
19066>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19067>
19068> ------------------------------------------------------------------------------
19069> --------------------
19070> | DIVERTHYD(******)|
19071> | IN= 1   # OUT= 5 |
19072> --------------------
19073>     Outflow / Inflow  Relationships
19074>
19075>      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
19076>      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
19077>       0.00     0.00     0.00     0.00     0.00     0.00
19078>       0.37     0.00     0.00     0.00     0.00     0.37
19079>       0.37     1.00     0.00     0.00     0.00     1.37
19080>       0.37   100.00     0.00     0.00     0.00   100.37
19081>
19082>                           AREA     QPEAK     TPEAK     R.V.
19083>                           (ha)     (cms)     (hrs)     (mm)
19084>     TOTAL HYD.(ID= 1):   3.63      1.10      6.00    76.71
19085>     ==========================================================
19086>     ID= 2  (   2)    :   2.80      0.37      6.00    76.71
19087>     ID= 3  (   2)    :   0.83      0.73      6.00    76.71
19088>     ID= 4  (   2)    :   0.00      0.00      0.00     0.00
19089>     ID= 5  (   2)    :   0.00      0.00      0.00     0.00
19090>     ID= 6  (   2)    :   0.00      0.00      0.00     0.00
19091> ------------------------------------------------------------------------------
19092>
19093> --------------------
19094> | ADD HYD  (******)|
19095> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
19096> --------------------         (ha)    (cms)    (hrs)     (mm)
19097>        ID1= 1 (******):     0.29   0.048     6.00    51.31
19098>      + ID2= 2 (******):     2.80   0.373     6.00    76.71
19099>        ====================================================
19100>        ID = 3 (******):     3.09   0.421     6.00    74.33
19101>
19102>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19103> ------------------------------------------------------------------------------
19104>
19105> --------------------
19106> | ADD HYD  (******)|
19107> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
19108> --------------------         (ha)    (cms)    (hrs)     (mm)
19109>        ID1= 1 (******):     1.01   0.148     6.08    51.43
19110>      + ID2= 2 (******):     3.09   0.421     6.00    74.33
19111>        ====================================================
19112>        ID = 3 (******):     4.10   0.556     6.00    68.69
19113>
19114>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19115> ------------------------------------------------------------------------------
19116>
19117> --------------------
19118> | ADD HYD  (******)|
19119> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
19120> --------------------         (ha)    (cms)    (hrs)     (mm)
19121>        ID1= 1 (******):     2.16   0.281     6.08    51.46
19122>      + ID2= 2 (******):     4.10   0.556     6.00    68.69
19123>        ====================================================
19124>        ID = 3 (******):     6.26   0.798     6.00    62.74
19125>
19126>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19127> ------------------------------------------------------------------------------
19128> --------------------
19129> | CALIB            |
19130> | NASHYD   (******)|   Area    (ha)=   1.92   Curve Number   (CN)= 85.0
19131> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
19132> --------------------   U.H. Tp(hrs)=   0.23
19133>
19134>     Unit Hyd Qpeak  (cms)=   0.319
19135>
19136>     PEAK FLOW       (cms)=   0.273 (i)
19137>     TIME TO PEAK    (hrs)=   6.083
19138>     RUNOFF VOLUME    (mm)=  51.439
19139>     TOTAL RAINFALL   (mm)=  84.737
19140>     RUNOFF COEFFICIENT   =   0.607
19141>
19142>     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19143>
19144> ------------------------------------------------------------------------------
19145> --------------------
19146> | CALIB            |
19147> | NASHYD   (******)|   Area    (ha)=   0.71   Curve Number   (CN)= 85.0
19148> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
19149> --------------------   U.H. Tp(hrs)=   0.20
19150>
19151>     Unit Hyd Qpeak  (cms)=   0.136
19152>
19153>     PEAK FLOW       (cms)=   0.109 (i)
19154>     TIME TO PEAK    (hrs)=   6.083
19155>     RUNOFF VOLUME    (mm)=  51.398
19156>     TOTAL RAINFALL   (mm)=  84.737
19157>     RUNOFF COEFFICIENT   =   0.607
19158>
19159>     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19160>
19161> ------------------------------------------------------------------------------
19162> --------------------
19163> | CALIB            |
19164> | STANDHYD (******)|   Area    (ha)=   8.29
19165> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
19166> --------------------
19167>                              IMPERVIOUS    PERVIOUS (i)
19168>     Surface Area     (ha)=       8.21         0.08
19169>     Dep. Storage     (mm)=       2.00         4.13
19170>     Average Slope     (%)=       1.00         2.00
19171>     Length            (m)=      30.00        30.00
19172>     Mannings n           =      0.013        0.025
19173>
19174>     Max.Eff.Inten.(mm/hr)=     111.66        86.23
19175>                   over (min)        5.00         5.00
19176>     Storage Coeff.  (min)=       1.19 (ii)    1.41 (ii)
19177>     Unit Hyd. Tpeak (min)=       5.00         5.00
19178>     Unit Hyd. peak  (cms)=       0.33         0.33
19179>                                                      *TOTALS*
19180>     PEAK FLOW       (cms)=       2.55         0.02          2.566 (iii)
19181>     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
19182>     RUNOFF VOLUME    (mm)=      82.74        53.28         82.44
19183>     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
19184>     RUNOFF COEFFICIENT   =       0.98         0.63          0.97
19185>
19186> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
19187>
19188>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
19189>           CN*  =  86.0    Ia = Dep. Storage  (Above)
19190>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
19191>           THAN THE STORAGE COEFFICIENT.
19192>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19193>
19194> ------------------------------------------------------------------------------
19195> --------------------
19196> | CALIB            |
19197> | STANDHYD (******)|   Area    (ha)=   1.19
19198> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
19199> --------------------
19200>                              IMPERVIOUS    PERVIOUS (i)
19201>     Surface Area     (ha)=       1.18         0.01
19202>     Dep. Storage     (mm)=       2.00         4.13
19203>     Average Slope     (%)=       1.00         2.00
19204>     Length            (m)=      30.00        30.00
19205>     Mannings n           =      0.013        0.025
19206>
19207>     Max.Eff.Inten.(mm/hr)=     111.66        86.23
19208>                   over (min)        5.00         5.00
19209>     Storage Coeff.  (min)=       1.19 (ii)    1.41 (ii)
19210>     Unit Hyd. Tpeak (min)=       5.00         5.00
19211>     Unit Hyd. peak  (cms)=       0.33         0.33
19212>                                                      *TOTALS*
19213>     PEAK FLOW       (cms)=       0.37         0.00          0.368 (iii)
19214>     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
19215>     RUNOFF VOLUME    (mm)=      82.74        53.28         82.44
19216>     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
19217>     RUNOFF COEFFICIENT   =       0.98         0.63          0.97
19218>
19219> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
19220>
19221>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
19222>           CN*  =  86.0    Ia = Dep. Storage  (Above)
19223>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
19224>           THAN THE STORAGE COEFFICIENT.
19225>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19226>
19227> ------------------------------------------------------------------------------
19228>
19229> --------------------
19230> | ADD HYD  (******)|
19231> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
19232> --------------------         (ha)    (cms)    (hrs)     (mm)
19233>        ID1= 1 (******):     0.71   0.109     6.08    51.40
19234>      + ID2= 2 (******):     1.92   0.273     6.08    51.44
19235>        ====================================================
19236>        ID = 3 (******):     2.63   0.382     6.08    51.43
19237>
19238>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19239> ------------------------------------------------------------------------------
19240>
19241> --------------------
19242> | ADD HYD  (******)|
19243> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
19244> --------------------         (ha)    (cms)    (hrs)     (mm)
19245>        ID1= 3 (******):     2.63   0.382     6.08    51.43
19246>      + ID2= 2 (******):     8.29   2.566     6.00    82.44
19247>        ====================================================
19248>        ID = 1 (******):    10.92   2.915     6.00    74.97
19249>
19250>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19251> ------------------------------------------------------------------------------
19252>
19253> --------------------
19254> | ADD HYD  (******)|
19255> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
19256> --------------------         (ha)    (cms)    (hrs)     (mm)
19257>        ID1= 1 (******):    10.92   2.915     6.00    74.97
19258>      + ID2= 2 (******):     1.19   0.368     6.00    82.44
19259>        ====================================================
19260>        ID = 3 (******):    12.11   3.283     6.00    75.71
19261>
19262>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19263> ------------------------------------------------------------------------------
19264>
19265> --------------------
19266> | ADD HYD  (******)|
19267> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
19268> --------------------         (ha)    (cms)    (hrs)     (mm)
19269>        ID1= 3 (******):    12.11   3.283     6.00    75.71
19270>      + ID2= 2 (******):     3.16   0.392     6.08    55.80
19271>        ====================================================
19272>        ID = 1 (******):    15.27   3.658     6.00    71.59
19273>
19274>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19275> ------------------------------------------------------------------------------
19276>
19277> --------------------
19278> | ADD HYD  (******)|
```

```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    15.27   3.658     6.00    71.59
      + ID2= 2 (******):     3.54   0.474     6.00    55.28
        ==================================================
        ID = 3 (******):    18.80   4.132     6.00    68.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    18.80   4.132     6.00    68.52
      + ID2= 2 (******):     6.26   0.798     6.00    62.74
        ==================================================
        ID = 1 (******):    25.07   4.930     6.00    67.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    1.0509      1.2511
                           0.0499      0.1231   |    1.2225      1.4841
                           0.0887      0.3106   |    1.2743      1.5652
                           0.1027      0.4143   |    1.3240      1.6479
                           0.1415      0.5824   |    1.5681      1.7322
                           0.4137      0.7655   |    1.9730      1.8182
                           0.8423      1.0330   |    2.4824      1.9059

                                AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     25.065     4.930      6.00      67.08
   OUTFLOW: ID= 1 (******)     25.065     0.786      6.58      67.05
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.95
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.9988

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30361002) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30361001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30361002)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.70   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.127

     PEAK FLOW       (cms)=   0.105 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.415
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    25.07   0.786     6.58    67.05
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 3 ( 50360):    25.07   0.786     6.58    67.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50360):    25.07   0.786     6.58    67.05
      + ID2= 2 (******):     0.70   0.105     6.08    51.41
        ==================================================
        ID = 1 ( 50360):    25.77   0.816     6.58    66.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50360):    25.77   0.816     6.58    66.63
      + ID2= 2 ( 60350):   707.75  40.610     6.50    60.19
        ==================================================
        ID = 3 ( 50360):   733.51  41.419     6.50    60.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.30        0.0450
                    6.00         127.39        0.0450
                   12.00         127.46        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04        0.0450
                   72.00         123.15        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)       (cms)        (m/s)      (min)
         0.09   122.98    .246E+03         0.4         0.31      10.02
         0.33   123.21    .251E+04        11.8         0.86       3.57
         0.56   123.45    .538E+04        39.9         1.37       2.25
         0.80   123.68    .842E+04        81.1         1.78       1.73
         1.04   123.92    .116E+05       134.5         2.13       1.44
         1.27   124.16    .150E+05       200.0         2.46       1.25
         1.51   124.39    .185E+05       278.3         2.78       1.11
         1.74   124.63    .220E+05       367.4         3.08       1.00
         1.98   124.86    .257E+05       466.7         3.35       0.92
         2.22   125.10    .294E+05       576.1         3.61       0.85
         2.45   125.34    .332E+05       695.4         3.86       0.80
         2.69   125.57    .371E+05       824.8         4.10       0.75
         2.92   125.81    .410E+05       963.8         4.33       0.71
         3.16   126.04    .451E+05      1112.3         4.55       0.68
         3.39   126.28    .492E+05      1270.1         4.76       0.65
         3.63   126.51    .534E+05      1437.3         4.97       0.62
         3.87   126.75    .576E+05      1613.7         5.16       0.60
         4.10   126.99    .620E+05      1791.1         5.33       0.58
         4.34   127.22    .665E+05      1970.4         5.47       0.56

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)   733.51    41.42    6.50  60.42      0.57      1.38
   OUTFLOW: ID= 1 ( 60390)   733.51    41.59    6.50  60.42      0.57      1.38


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 80.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   2.606 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  42.048
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.496

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   2.606     6.08    42.05
      + ID2= 2 ( 60390):   733.51  41.591     6.50    60.42
        ==================================================
        ID = 3 ( 50390):   754.06  42.518     6.42    59.91

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83          6.10
     Dep. Storage     (mm)=       2.00          6.08
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     345.74         42.00
     Mannings n             =     0.015         0.280

     Max.Eff.Inten.(mm/hr)=     111.66        119.46
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       4.96 (ii)    12.86 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.22          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.82          1.28          3.949 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      82.74         52.52          68.33
     TOTAL RAINFALL   (mm)=      84.74         84.74          84.74
     RUNOFF COEFFICIENT   =       0.98          0.62           0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.70        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04    0.0450 /0.0350  Main Channel
                   72.00         122.86        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)       (cms)        (m/s)      (min)
         0.12   122.98    .275E+03         0.7         0.35       6.78
         0.36   123.21    .218E+04        14.7         0.95       2.47
         0.59   123.45    .437E+04        44.6         1.44       1.63
         0.83   123.68    .670E+04        87.2         1.84       1.28
         1.06   123.92    .916E+04       141.6         2.19       1.08
         1.30   124.16    .117E+05       208.1         2.51       0.94
         1.54   124.39    .144E+05       287.0         2.82       0.84
         1.77   124.63    .171E+05       376.7         3.11       0.76
         2.01   124.86    .199E+05       476.5         3.38       0.70
         2.24   125.10    .228E+05       586.1         3.64       0.65
         2.48   125.33    .257E+05       705.6         3.88       0.61
         2.71   125.57    .287E+05       835.1         4.12       0.57
         2.95   125.80    .317E+05       974.0         4.35       0.54
         3.19   126.04    .348E+05      1122.3         4.56       0.52
         3.42   126.28    .379E+05      1279.8         4.77       0.49
         3.66   126.51    .411E+05      1446.6         4.97       0.47
         3.89   126.75    .444E+05      1622.6         5.17       0.46
         4.13   126.98    .477E+05      1786.6         5.29       0.45
         4.36   127.22    .513E+05      1942.9         5.36       0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)    17.93     3.95    6.00  68.33      0.18      0.41
   OUTFLOW: ID= 1 ( 60370)    17.93     3.26    6.00  68.33      0.17      0.39


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--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   754.06  42.518     6.42    59.91
      + ID2= 2 ( 60370):    17.93   3.263     6.00    68.33
        ==================================================
        ID = 3 ( 50400):   771.99  43.806     6.42    60.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         125.01        0.0450
                 20.00         123.70        0.0450
                 25.00         123.04        0.0450
                 30.00         120.84        0.0450
                 35.00         119.81    0.0450 /0.0350  Main Channel
                 40.00         119.74        0.0350      Main Channel
                 65.00         120.12        0.0450
                 90.00         120.58        0.0450
                100.00         125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.07  119.81    .209E+03       0.1         0.27       34.81
        0.35  120.09    .326E+04       4.7         0.83       11.50
        0.62  120.36    .916E+04      21.3         1.34        7.16
        0.90  120.63    .176E+05      51.5         1.68        5.69
        1.17  120.91    .270E+05      96.6         2.05        4.67
        1.44  121.18    .367E+05     153.8         2.41        3.98
        1.72  121.46    .466E+05     222.1         2.74        3.50
        1.99  121.73    .567E+05     300.7         3.05        3.14
        2.26  122.00    .669E+05     389.1         3.34        2.87
        2.54  122.28    .774E+05     487.1         3.62        2.65
        2.81  122.55    .880E+05     594.2         3.88        2.47
        3.09  122.82    .988E+05     710.4         4.13        2.32
        3.36  123.10    .110E+06     834.4         4.36        2.20
        3.63  123.37    .121E+06     964.4         4.57        2.10
        3.91  123.65    .133E+06    1104.4         4.76        2.01
        4.18  123.92    .145E+06    1250.0         4.93        1.94
        4.45  124.19    .159E+06    1406.7         5.09        1.88
        4.73  124.47    .172E+06    1575.5         5.25        1.82
        5.00  124.74    .187E+06    1756.1         5.39        1.77

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  771.99    43.81    6.42  60.11      0.83      1.58
   OUTFLOW: ID= 1 ( 60400)  771.99    43.18    6.50  60.11      0.82      1.57


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area    (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     111.66        26.14
                   over (min)       5.00        95.00
     Storage Coeff.  (min)=       4.26 (ii)   91.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00        95.00
     Unit Hyd. peak  (cms)=       0.23         0.01
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.60         0.18          0.630 (iii)
     TIME TO PEAK    (hrs)=       6.00         7.50          6.00
     RUNOFF VOLUME    (mm)=      82.74        40.16         50.83
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.47          0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40410):     7.92   0.630     6.00    50.83
     + ID2= 2 ( 60400):   771.99  43.181     6.50    60.11
       ================================================
       ID = 3 ( 50410):   779.91  43.345     6.50    60.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.172 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.455
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.197

     PEAK FLOW       (cms)=   0.171 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.448
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.12   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.477

     PEAK FLOW       (cms)=   0.459 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.483
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     4.12   0.459     6.17    51.48
     + ID2= 2 (******):     1.24   0.171     6.08    51.45
       ================================================
       ID = 3 (******):     5.36   0.622     6.17    51.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40420):    67.57   8.519     6.00    54.82
     + ID2= 2 (******):     6.64   0.787     6.17    51.47
       ================================================
       ID = 3 (******):    74.21   9.165     6.00    54.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50410):   779.91  43.345     6.50    60.02
     + ID2= 2 (******):    74.21   9.165     6.00    54.52
       ================================================
       ID = 3 ( 50420):   854.12  47.813     6.50    59.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         121.79        0.0450
                 12.00         116.08        0.0450
                 40.00         115.59    0.0450 /0.0350  Main Channel
                 44.00         114.89        0.0350      Main Channel
                 48.00         114.52        0.0350      Main Channel
                 52.00         115.72    0.0350 /0.0450  Main Channel
                 56.00         115.93        0.0450
                 60.00         117.24        0.0450
                 64.00         119.04        0.0450
                 68.00         120.69        0.0450
                 72.00         121.01        0.0450
                 74.00         121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36  114.88    .645E+03       0.7         0.83       14.38
        0.71  115.23    .236E+04       4.6         1.41        8.47
        1.07  115.59    .489E+04      12.6         1.84        6.48
        1.44  115.96    .112E+05      30.9         1.97        6.04
        1.80  116.33    .227E+05      69.1         2.17        5.49
        2.17  116.70    .351E+05     125.6         2.56        4.65
        2.54  117.06    .479E+05     197.5         2.95        4.04
        2.91  117.43    .612E+05     283.9         3.32        3.59
        3.28  117.80    .749E+05     384.1         3.66        3.25
        3.65  118.17    .891E+05     497.4         3.99        2.99
        4.02  118.54    .104E+06     623.5         4.30        2.77
        4.39  118.91    .119E+06     762.2         4.59        2.60
        4.76  119.28    .134E+06     913.1         4.87        2.45
        5.13  119.65    .150E+06    1076.2         5.13        2.32
        5.49  120.02    .166E+06    1251.7         5.38        2.21
        5.86  120.39    .183E+06    1439.5         5.62        2.12
        6.23  120.75    .200E+06    1634.3         5.84        2.04
        6.60  121.12    .219E+06    1831.3         5.99        1.99
        6.97  121.49    .238E+06    2058.5         6.20        1.92

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420)  854.12    47.81    6.50  59.54      1.60      2.06
   OUTFLOW: ID= 1 ( 60420)  854.12    46.84    6.58  59.54      1.59      2.05


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--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.41        11.03
     Dep. Storage     (mm)=       2.00         7.80
     Average Slope     (%)=       3.50         3.50
     Length            (m)=     465.00       102.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=     111.66        71.44
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.60 (ii)   18.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       6.28         1.15          7.082 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      82.74        42.76         68.35
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.50          0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
19891> --------------------------------------------------------------------------------
19892>
19893> --------------------
19894> | ADD HYD  ( 50430)|
19895> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
19896> --------------------          (ha)    (cms)    (hrs)     (mm)
19897>         ID1= 1 ( 40430):    32.43   7.082     6.00    68.35
19898>       + ID2= 2 ( 60420):   854.12  46.843     6.58    59.54
19899>         ================================================
19900>         ID = 3 ( 50430):   886.55  48.007     6.58    59.86
19901>
19902>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
19903> --------------------------------------------------------------------------------
19904> --------------------
19905> | ROUTE CHN( 60430)|
19906> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
19907> --------------------
19908>                <------ DATA FOR SECTION (   1.1) ------>
19909>                Distance      Elevation       Manning
19910>                    0.00         116.29        0.0450
19911>                   20.00         114.05        0.0450
19912>                   25.00         110.83        0.0450
19913>                   30.00         109.36        0.0450
19914>                   35.00         108.23    0.0450 /0.0350  Main Channel
19915>                   40.00         107.52        0.0350      Main Channel
19916>                   45.00         108.00    0.0350 /0.0450  Main Channel
19917>                   50.00         107.84        0.0450
19918>                   55.00         108.21        0.0450
19919>                   60.00         108.95        0.0450
19920>                   65.00         109.35        0.0450
19921>                   70.00         109.41        0.0450
19922>                   75.00         109.48        0.0450
19923>                   80.00         109.77        0.0450
19924>                   85.00         112.20        0.0450
19925>                   90.00         115.48        0.0450
19926>                  100.00         116.29        0.0450
19927>
19928>       <--------------------- TRAVEL TIME TABLE ---------------------->
19929>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
19930>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
19931>         0.24  107.76    .285E+03        0.4          0.74      12.74
19932>         0.48  108.00    .146E+04        2.6          1.01       9.32
19933>         0.97  108.49    .695E+04       23.3          1.90       4.97
19934>         1.46  108.97    .141E+05       64.5          2.60       3.63
19935>         1.94  109.46    .233E+05      116.9          2.84       3.33
19936>         2.43  109.95    .371E+05      214.6          3.28       2.88
19937>         2.92  110.44    .519E+05      350.2          3.83       2.47
19938>         3.41  110.92    .675E+05      515.9          4.34       2.18
19939>         3.89  111.41    .836E+05      711.3          4.82       1.96
19940>         4.38  111.90    .100E+06      933.4          5.28       1.79
19941>         4.87  112.39    .117E+06     1182.4          5.71       1.65
19942>         5.35  112.87    .135E+06     1458.0          6.13       1.54
19943>         5.84  113.36    .153E+06     1758.3          6.52       1.45
19944>         6.33  113.85    .171E+06     2082.9          6.90       1.37
19945>         6.82  114.34    .190E+06     2410.6          7.19       1.31
19946>         7.30  114.82    .210E+06     2758.9          7.43       1.27
19947>         7.79  115.31    .232E+06     3143.1          7.68       1.23
19948>         8.28  115.80    .255E+06     3473.3          7.71       1.23
19949>         8.77  116.29    .282E+06     3812.4          7.67       1.23
19950>
19951>                                    <---- hydrograph ---->   <-pipe / channel->
19952>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
19953>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
19954>    INFLOW : ID= 2 ( 50430)  886.55    48.01    6.58  59.86      1.26      2.27
19955>    OUTFLOW: ID= 1 ( 60430)  886.55    47.80    6.58  59.86      1.26      2.26
19956>
19957>
19958>
19959> --------------------------------------------------------------------------------
19960> --------------------
19961> | CALIB            |
19962> | STANDHYD ( 40440)|   Area    (ha)=  57.11
19963> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
19964> --------------------
19965>                              IMPERVIOUS    PERVIOUS (i)
19966>      Surface Area     (ha)=      37.70         19.42
19967>      Dep. Storage     (mm)=       2.00          6.60
19968>      Average Slope     (%)=       2.50          2.50
19969>      Length            (m)=     617.06         45.00
19970>      Mannings n           =      0.015         0.290
19971>
19972>      Max.Eff.Inten.(mm/hr)=     111.66         64.60
19973>                    over (min)        5.00         20.00
19974>      Storage Coeff.  (min)=       6.03 (ii)    15.25 (ii)
19975>      Unit Hyd. Tpeak (min)=       5.00         20.00
19976>      Unit Hyd. peak  (cms)=       0.19          0.07
19977>                                                          *TOTALS*
19978>      PEAK FLOW       (cms)=      10.88          1.86        12.186 (iii)
19979>      TIME TO PEAK    (hrs)=       6.00          6.17         6.00
19980>      RUNOFF VOLUME    (mm)=      82.74         37.69        66.97
19981>      TOTAL RAINFALL   (mm)=      84.74         84.74        84.74
19982>      RUNOFF COEFFICIENT   =       0.98          0.44         0.79
19983>
19984>
19985>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
19986>            CN*  =  74.5    Ia = Dep. Storage  (Above)
19987>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
19988>            THAN THE STORAGE COEFFICIENT.
19989>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
19990>
19991> --------------------------------------------------------------------------------
19992>
19993> --------------------
19994> | ADD HYD  ( 50440)|
19995> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
19996> --------------------          (ha)    (cms)    (hrs)     (mm)
19997>         ID1= 1 ( 40440):    57.11  12.186     6.00    66.97
19998>       + ID2= 2 ( 60430):   886.55  47.800     6.58    59.86
19999>         ================================================
20000>         ID = 3 ( 50440):   943.67  49.769     6.58    60.29
20001>
20002>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20003> --------------------------------------------------------------------------------
20004> --------------------
20005> | ROUTE CHN( 60440)|
20006> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
20007> --------------------
20008>                <------ DATA FOR SECTION (   1.1) ------>
20009>                Distance      Elevation       Manning
20010>                    0.00         104.01        0.0450
20011>                   10.00         103.90        0.0450
20012>                   20.00         103.74        0.0450
20013>                   30.00         103.66        0.0450
20014>                   40.00         103.60        0.0450
20015>                   50.00         102.52        0.0450
20016>                   60.00         101.16        0.0450
20017>                   70.00         100.60        0.0450
20018>                   80.00         100.17        0.0450
20019>                   90.00          99.85        0.0450
20020>                  100.00          97.89        0.0350      Main Channel
20021>                  110.00          97.62        0.0350      Main Channel
20022>                  120.00          99.12        0.0450
20023>                  130.00          99.16        0.0450
20024>                  140.00          99.36        0.0450
20025>                  150.00          99.66        0.0450
20026>                  160.00          99.68        0.0450
20027>                  180.00          99.76        0.0450
20028>                  190.00         104.10        0.0450
20029>
20030>       <--------------------- TRAVEL TIME TABLE ---------------------->
20031>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
20032>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
20033>         0.27   97.89    .102E+04        1.2          0.77      13.74
20034>         0.60   98.21    .381E+04        9.4          1.56       6.74
20035>         0.92   98.53    .738E+04       24.3          2.08       5.05
20036>         1.24   98.86    .117E+05       46.2          2.50       4.22
20037>         1.56   99.18    .171E+05       76.6          2.84       3.71
20038>         1.89   99.50    .264E+05      124.5          2.98       3.53
20039>         2.21   99.82    .403E+05      189.1          2.96       3.56
20040>         2.53  100.15    .597E+05      286.1          3.03       3.48
20041>         2.85  100.47    .809E+05      417.7          3.26       3.23
20042>         3.17  100.79    .104E+06      580.2          3.53       2.98
20043>         3.50  101.11    .128E+06      771.7          3.81       2.77
20044>         3.82  101.44    .153E+06      996.3          4.10       2.57
20045>         4.14  101.76    .179E+06     1248.4          4.40       2.40
20046>         4.46  102.08    .206E+06     1526.4          4.68       2.25
20047>         4.79  102.40    .233E+06     1829.8          4.96       2.13
20048>         5.11  102.73    .261E+06     2156.4          5.22       2.02
20049>         5.43  103.05    .290E+06     2507.0          5.47       1.93
20050>         5.75  103.37    .319E+06     2882.7          5.71       1.85
20051>         6.08  103.69    .350E+06     3194.7          5.77       1.83
20052>
20053>                                    <---- hydrograph ---->   <-pipe / channel->
20054>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
20055>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
20056>    INFLOW : ID= 2 ( 50440)  943.67    49.77    6.58  60.29      1.28      2.53
20057>    OUTFLOW: ID= 1 ( 60440)  943.67    49.49    6.67  60.29      1.27      2.52
20058>
20059>
20060>
20061> --------------------------------------------------------------------------------
20062> --------------------
20063> | CALIB            |
20064> | STANDHYD ( 40450)|   Area    (ha)=  30.40
20065> |ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
20066> --------------------
20067>                              IMPERVIOUS    PERVIOUS (i)
20068>      Surface Area     (ha)=      13.37         17.02
20069>      Dep. Storage     (mm)=       2.00          6.90
20070>      Average Slope     (%)=       0.80          0.80
20071>      Length            (m)=     450.16        150.00
20072>      Mannings n           =      0.015         0.300
20073>
20074>      Max.Eff.Inten.(mm/hr)=     111.66         37.27
20075>                    over (min)        5.00         45.00
20076>      Storage Coeff.  (min)=       7.02 (ii)    41.02 (ii)
20077>      Unit Hyd. Tpeak (min)=       5.00         45.00
20078>      Unit Hyd. peak  (cms)=       0.17          0.03
20079>                                                          *TOTALS*
20080>      PEAK FLOW       (cms)=       3.56          0.98         3.891 (iii)
20081>      TIME TO PEAK    (hrs)=       6.00          6.58         6.00
20082>      RUNOFF VOLUME    (mm)=      82.74         40.70        57.94
20083>      TOTAL RAINFALL   (mm)=      84.74         84.74        84.74
20084>      RUNOFF COEFFICIENT   =       0.98          0.48         0.68
20085>
20086>
20087>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20088>            CN*  =  77.0    Ia = Dep. Storage  (Above)
20089>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20090>            THAN THE STORAGE COEFFICIENT.
20091>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20092>
20093> --------------------------------------------------------------------------------
20094>
20095> --------------------
20096> | ADD HYD  ( 50450)|
20097> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
20098> --------------------          (ha)    (cms)    (hrs)     (mm)
20099>         ID1= 1 ( 40450):    30.40   3.891     6.00    57.94
20100>       + ID2= 2 ( 60440):   943.67  49.494     6.67    60.29
20101>         ================================================
20102>         ID = 3 ( 50450):   974.07  50.781     6.67    60.22
20103>
20104>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20105> --------------------------------------------------------------------------------
20106> --------------------
20107> | ROUTE CHN( 60450)|
20108> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
20109> --------------------
20110>                <------ DATA FOR SECTION (   1.1) ------>
20111>                Distance      Elevation       Manning
20112>                    0.00         97.16        0.0450
20113>                    3.00         96.00        0.0450
20114>                    6.00         95.32        0.0450
20115>                    9.00         94.64        0.0450
20116>                   12.00         94.43        0.0450
20117>                   15.00         94.29        0.0450
20118>                   18.00         94.10        0.0350      Main Channel
20119>                   21.00         94.02        0.0350      Main Channel
20120>                   24.00         93.70        0.0350      Main Channel
20121>                   27.00         94.22    0.0350 /0.0450  Main Channel
20122>                   30.00         94.90        0.0450
20123>                   32.00         95.30        0.0450
20124>                   34.00         95.78        0.0450
20125>                   36.00         96.25        0.0450
20126>                   38.00         96.60        0.0450
20127>                   48.00         97.14        0.0450
20128>
20129>       <--------------------- TRAVEL TIME TABLE ---------------------->
20130>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
20131>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
20132>         0.13   93.83    .942E+02        0.1          0.39      30.45
20133>         0.27   93.96    .377E+03        0.3          0.62      19.18
20134>         0.40   94.09    .911E+03        0.9          0.69      17.28
20135>         0.59   94.29    .230E+04        3.4          1.06      11.15
20136>         0.78   94.48    .428E+04        7.9          1.32       8.98
20137>         0.97   94.67    .679E+04       14.6          1.53       7.74
20138>         1.16   94.86    .963E+04       23.7          1.75       6.77
20139>         1.35   95.05    .127E+05       34.9          1.96       6.07
20140>         1.54   95.24    .160E+05       48.1          2.14       5.54
20141>         1.73   95.43    .196E+05       63.6          2.31       5.13
20142>         1.92   95.62    .233E+05       81.2          2.48       4.79
20143>         2.11   95.81    .273E+05      101.0          2.63       4.51
20144>         2.30   96.00    .315E+05      123.0          2.78       4.27
20145>         2.49   96.19    .360E+05      147.8          2.93       4.06
20146>         2.68   96.38    .406E+05      174.6          3.07       3.87
20147>         2.87   96.57    .454E+05      203.7          3.20       3.71
20148>         3.06   96.76    .505E+05      232.7          3.28       3.62
20149>         3.25   96.95    .562E+05      264.9          3.36       3.54
20150>         3.44   97.14    .624E+05      300.8          3.43       3.46
20151>
20152>                                    <---- hydrograph ---->   <-pipe / channel->
20153>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
20154>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
20155>    INFLOW : ID= 2 ( 50450)  974.07    50.78    6.67  60.22      1.57      2.17
20156>    OUTFLOW: ID= 1 ( 60450)  974.07    50.28    6.75  60.22      1.57      2.16
20157>
20158>
20159>
20160> --------------------------------------------------------------------------------
20161> --------------------
20162> | CALIB            |
20163> | STANDHYD ( 40460)|   Area    (ha)=  22.40
20164> |ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
20165> --------------------
20166>                              IMPERVIOUS    PERVIOUS (i)
20167>      Surface Area     (ha)=      15.36          7.04
20168>      Dep. Storage     (mm)=       2.00          6.68
20169>      Average Slope     (%)=       2.40          2.40
20170>      Length            (m)=     386.43         40.00
20171>      Mannings n           =      0.015         0.280
20172>
20173>      Max.Eff.Inten.(mm/hr)=     111.66        109.65
20174>                    over (min)        5.00         15.00
20175>      Storage Coeff.  (min)=       4.61 (ii)    11.50 (ii)
20176>      Unit Hyd. Tpeak (min)=       5.00         15.00
20177>      Unit Hyd. peak  (cms)=       0.22          0.09
20178>                                                          *TOTALS*
20179>      PEAK FLOW       (cms)=       3.58          1.38         4.800 (iii)
20180>      TIME TO PEAK    (hrs)=       6.00          6.08         6.00
20181>      RUNOFF VOLUME    (mm)=      82.74         44.60        64.75
20182>      TOTAL RAINFALL   (mm)=      84.74         84.74        84.74
20183>      RUNOFF COEFFICIENT   =       0.98          0.53         0.76
20184>
20185> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
20186>
20187>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20188>            CN*  =  72.5    Ia = Dep. Storage  (Above)
20189>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20190>            THAN THE STORAGE COEFFICIENT.
20191>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20192>
20193> --------------------------------------------------------------------------------
20194>
20195> --------------------
20196> | ADD HYD  ( 50460)|
```

```
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40   4.800     6.00    64.75
     + ID2= 2 ( 60450):   974.07  50.277     6.75    60.22
       =================================================
       ID = 3 ( 50460):   996.47  50.796     6.67    60.32

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         91.61        0.0450
                  3.00         91.57        0.0450
                  6.00         91.15        0.0450
                  9.00         90.70        0.0450
                 12.00         89.72        0.0450
                 15.00         88.86        0.0450
                 18.00         88.38    0.0450 /0.0350  Main Channel
                 21.00         87.96        0.0350      Main Channel
                 24.00         88.18    0.0350 /0.0450  Main Channel
                 26.00         88.19        0.0450
                 28.00         88.30        0.0450
                 30.00         90.32        0.0450
                 32.00         90.49        0.0450
                 34.00         90.80        0.0450
                 36.00         90.85        0.0450
                 38.00         90.97        0.0450
                 40.00         91.15        0.0450
                 42.00         91.29        0.0450
                 44.00         91.40        0.0450
                 46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   88.07    .589E+02        0.0         0.34      23.89
        0.21   88.18    .235E+03        0.3         0.54      15.05
        0.41   88.38    .106E+04        1.8         0.85       9.64
        0.61   88.57    .211E+04        5.3         1.22       6.69
        0.81   88.77    .330E+04       10.2         1.51       5.40
        1.01   88.97    .462E+04       16.6         1.76       4.63
        1.21   89.17    .603E+04       24.5         1.99       4.10
        1.41   89.37    .753E+04       33.8         2.19       3.72
        1.61   89.57    .912E+04       44.4         2.38       3.42
        1.81   89.77    .108E+05       56.4         2.56       3.19
        2.00   89.97    .125E+05       69.9         2.72       2.99
        2.20   90.17    .144E+05       84.7         2.88       2.83
        2.40   90.37    .163E+05       99.8         3.00       2.72
        2.60   90.56    .184E+05      114.7         3.04       2.68
        2.80   90.76    .208E+05      132.8         3.13       2.61
        3.00   90.96    .235E+05      148.4         3.09       2.64
        3.20   91.16    .266E+05      170.7         3.13       2.60
        3.40   91.36    .302E+05      194.9         3.16       2.58
        3.60   91.56    .342E+05      223.5         3.20       2.55

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460)  996.47    50.80    6.67  60.32      1.71      2.47
   OUTFLOW: ID= 1 ( 60460)  996.47    50.83    6.75  60.32      1.71      2.47


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53        30.66
     Dep. Storage     (mm)=       2.00         5.90
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     775.42        40.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     111.66       102.61
                   over (min)       10.00        20.00
     Storage Coeff.  (min)=       8.23 (ii)   16.55 (ii)
     Unit Hyd. Tpeak (min)=       10.00        20.00
     Unit Hyd. peak  (cms)=       0.13         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       12.62        4.64      15.938 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17        6.00
     RUNOFF VOLUME    (mm)=       82.74        46.36       66.01
     TOTAL RAINFALL   (mm)=       84.74        84.74       84.74
     RUNOFF COEFFICIENT   =       0.98         0.55        0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40470):    90.19  15.938     6.00    66.01
     + ID2= 2 ( 60460):   996.47  50.835     6.75    60.32
       =================================================
       ID = 3 ( 50470):  1086.66  53.724     6.75    60.79

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         89.19        0.0450
                  2.00         88.89        0.0450
                  4.00         88.54        0.0450
                  6.00         88.31        0.0450
                  8.00         88.14        0.0450
                 10.00         88.02        0.0450
                 12.00         87.99        0.0450
                 14.00         87.90        0.0450
                 16.00         87.84        0.0450
                 19.00         87.55        0.0450
                 22.00         86.85        0.0450
                 25.00         86.23        0.0350      Main Channel
                 28.00         86.23        0.0350      Main Channel
                 31.00         86.60        0.0450
                 34.00         87.49        0.0450
                 37.00         88.15        0.0450
                 41.00         88.21        0.0450
                 45.00         88.29        0.0450
                 48.00         88.36        0.0450
                 50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1086.66    53.72    6.75  60.79      2.08      1.71
   OUTFLOW: ID= 1 ( 60470) 1086.66    52.96    6.83  60.79      2.07      1.71


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--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82        13.61
     Dep. Storage     (mm)=       2.00         5.80
     Average Slope     (%)=       1.90         1.90
     Length            (m)=     613.35        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=     111.66       148.96
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       6.52 (ii)   11.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.18         0.09
                                                      *TOTALS*
     PEAK FLOW       (cms)=       9.64         3.74      12.992 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=       82.74        54.57       71.18
     TOTAL RAINFALL   (mm)=       84.74        84.74       84.74
     RUNOFF COEFFICIENT   =       0.98         0.64        0.84

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
---------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40480):    56.43  12.992     6.00    71.18
     + ID2= 2 ( 60470):  1086.66  52.963     6.83    60.79
       =================================================
       ID = 3 ( 50480):  1143.09  54.267     6.75    61.30

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         86.90        0.0450
                  2.00         86.76        0.0450
                  4.00         85.96        0.0450
                  6.00         85.44        0.0450
                  8.00         84.83        0.0450
                 10.00         84.50        0.0450
                 12.00         84.15        0.0450
                 14.00         83.85        0.0350      Main Channel
                 16.00         83.86        0.0350      Main Channel
                 18.00         83.99    0.0350 /0.0450  Main Channel
                 20.00         84.27        0.0450
                 22.00         84.55        0.0450
                 24.00         84.88        0.0450
                 26.00         85.37        0.0450
                 27.00         85.68        0.0450
                 28.00         85.91        0.0450
                 29.00         86.08        0.0450
                 30.00         86.21        0.0450
                 31.00         86.29        0.0450
                 34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03        0.3         0.48      10.34
        0.32   84.17    .460E+03        1.2         0.77       6.41
        0.48   84.33    .855E+03        2.8         0.98       5.07
        0.64   84.48    .135E+04        5.2         1.14       4.35
        0.80   84.64    .193E+04        8.3         1.28       3.88
        0.95   84.80    .261E+04       12.3         1.40       3.53
        1.11   84.96    .337E+04       17.4         1.53       3.23
        1.27   85.12    .419E+04       23.5         1.66       2.97
        1.43   85.28    .506E+04       30.5         1.79       2.77
        1.59   85.44    .599E+04       38.5         1.90       2.60
        1.75   85.60    .697E+04       47.3         2.01       2.46
        1.91   85.76    .801E+04       57.1         2.12       2.34
        2.07   85.92    .911E+04       67.8         2.21       2.24
        2.23   86.07    .103E+05       79.5         2.30       2.15
        2.39   86.23    .115E+05       91.9         2.37       2.09
        2.54   86.39    .128E+05      105.7         2.45       2.02
        2.70   86.55    .142E+05      121.2         2.53       1.95
        2.86   86.71    .156E+05      138.0         2.62       1.89
        3.02   86.87    .171E+05      153.0         2.65       1.87

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1143.09    54.27    6.75  61.30      1.86      2.09
   OUTFLOW: ID= 1 ( 60480) 1143.09    54.28    6.83  61.30      1.86      2.08


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--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60         4.16
     Dep. Storage     (mm)=       2.00         6.22
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     334.28        53.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     111.66       136.36
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.97 (ii)   13.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       3.04         0.97        3.902 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=       82.74        52.90       70.93
     TOTAL RAINFALL   (mm)=       84.74        84.74       84.74
     RUNOFF COEFFICIENT   =       0.98         0.62        0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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20503> ------------------------------------------------------------------------------
20504>
20505> --------------------
20506> | ADD HYD  ( 50490)|
20507> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
20508> --------------------          (ha)    (cms)    (hrs)     (mm)
20509>         ID1= 1 ( 40490):    16.76   3.902     6.00    70.93
20510>       + ID2= 2 ( 60480):  1143.09  54.283     6.83    61.30
20511>         ================================================
20512>         ID = 3 ( 50490):  1159.85  54.665     6.83    61.44
20513>
20514>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20515> ------------------------------------------------------------------------------
20516> --------------------
20517> | ROUTE CHN( 60490)|
20518> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
20519> --------------------
20520>                <------ DATA FOR SECTION (   1.1) ------>
20521>                Distance      Elevation       Manning
20522>                    0.00         85.84        0.0450
20523>                    6.00         84.32        0.0450
20524>                   12.00         84.21        0.0450
20525>                   18.00         84.12        0.0450
20526>                   24.00         84.08        0.0450
20527>                   30.00         84.10        0.0450
20528>                   36.00         84.03        0.0450
20529>                   42.00         83.92        0.0450
20530>                   48.00         83.88        0.0450
20531>                   54.00         82.88        0.0350      Main Channel
20532>                   60.00         83.12    0.0350 /0.0450  Main Channel
20533>                   64.00         83.65        0.0450
20534>                   68.00         83.60        0.0450
20535>                   72.00         83.67        0.0450
20536>                   76.00         83.70        0.0450
20537>                   80.00         83.82        0.0450
20538>                   84.00         83.90        0.0450
20539>                   88.00         84.05        0.0450
20540>                   92.00         84.16        0.0450
20541>                  100.00         85.83        0.0450
20542>
20543>       <---------------------- TRAVEL TIME TABLE ---------------------->
20544>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
20545>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
20546>         0.16    83.04    .332E+03        0.1         0.32      46.08
20547>         0.31    83.19    .129E+04        0.8         0.57      26.14
20548>         0.47    83.35    .259E+04        2.3         0.79      18.75
20549>         0.62    83.50    .418E+04        4.5         0.96      15.43
20550>         0.78    83.66    .626E+04        7.3         1.04      14.28
20551>         0.93    83.81    .101E+05       11.9         1.05      14.10
20552>         1.09    83.97    .153E+05       17.6         1.02      14.55
20553>         1.24    84.13    .231E+05       26.2         1.00      14.73
20554>         1.40    84.28    .341E+05       41.2         1.07      13.79
20555>         1.55    84.44    .460E+05       61.7         1.19      12.44
20556>         1.71    84.59    .582E+05       86.6         1.32      11.21
20557>         1.86    84.75    .706E+05      115.2         1.45      10.21
20558>         2.02    84.90    .831E+05      147.5         1.57       9.39
20559>         2.17    85.06    .959E+05      183.2         1.70       8.72
20560>         2.33    85.21    .109E+06      222.2         1.81       8.16
20561>         2.48    85.37    .122E+06      264.5         1.93       7.68
20562>         2.64    85.52    .135E+06      310.0         2.03       7.27
20563>         2.79    85.68    .149E+06      358.5         2.14       6.91
20564>         2.95    85.83    .162E+06      410.1         2.24       6.60
20565>
20566>                                    <---- hydrograph ---->   <-pipe / channel->
20567>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
20568>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
20569>    INFLOW : ID= 2 ( 50490) 1159.85    54.67    6.83  61.44      1.50      1.15
20570>    OUTFLOW: ID= 1 ( 60490) 1159.85    53.67    6.92  61.44      1.49      1.14
20571>
20572>
20573>
20574> ------------------------------------------------------------------------------
20575> --------------------
20576> | CALIB            |
20577> | STANDHYD ( 40810)|   Area    (ha)=  20.64
20578> |ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
20579> --------------------
20580>                              IMPERVIOUS    PERVIOUS (i)
20581>      Surface Area     (ha)=      15.92         4.72
20582>      Dep. Storage     (mm)=       2.00         5.43
20583>      Average Slope     (%)=       2.10         2.10
20584>      Length            (m)=     370.92        40.00
20585>      Mannings n           =      0.015        0.260
20586>
20587>      Max.Eff.Inten.(mm/hr)=     111.66       148.10
20588>                  over (min)        5.00        10.00
20589>      Storage Coeff.  (min)=       4.68 (ii)    9.28 (ii)
20590>      Unit Hyd. Tpeak (min)=       5.00        10.00
20591>      Unit Hyd. peak  (cms)=       0.22         0.12
20592>                                                          *TOTALS*
20593>      PEAK FLOW       (cms)=       3.82         1.47          5.287 (iii)
20594>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
20595>      RUNOFF VOLUME    (mm)=      82.74        54.52         71.80
20596>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
20597>      RUNOFF COEFFICIENT   =       0.98         0.64          0.85
20598>
20599> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
20600>
20601>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20602>             CN*  =  78.8    Ia = Dep. Storage  (Above)
20603>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20604>            THAN THE STORAGE COEFFICIENT.
20605>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20606>
20607> ------------------------------------------------------------------------------
20608>
20609> --------------------
20610> | ADD HYD  ( 50810)|
20611> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
20612> --------------------          (ha)    (cms)    (hrs)     (mm)
20613>         ID1= 1 ( 40810):    20.64   5.287     6.00    71.80
20614>       + ID2= 2 ( 60490):  1159.85  53.668     6.92    61.44
20615>         ================================================
20616>         ID = 3 ( 50810):  1180.48  54.055     6.92    61.62
20617>
20618>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20619> ------------------------------------------------------------------------------
20620> --------------------
20621> | CALIB            |
20622> | STANDHYD ( 40500)|   Area    (ha)=   9.32
20623> |ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
20624> --------------------
20625>                              IMPERVIOUS    PERVIOUS (i)
20626>      Surface Area     (ha)=       2.52         6.81
20627>      Dep. Storage     (mm)=       2.00         9.76
20628>      Average Slope     (%)=       3.20         3.20
20629>      Length            (m)=     249.31        47.00
20630>      Mannings n           =      0.015        0.350
20631>
20632>      Max.Eff.Inten.(mm/hr)=     111.66        76.90
20633>                  over (min)        5.00        15.00
20634>      Storage Coeff.  (min)=       3.25 (ii)   12.43 (ii)
20635>      Unit Hyd. Tpeak (min)=       5.00        15.00
20636>      Unit Hyd. peak  (cms)=       0.27         0.08
20637>                                                          *TOTALS*
20638>      PEAK FLOW       (cms)=       0.50         0.89          1.272 (iii)
20639>      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
20640>      RUNOFF VOLUME    (mm)=      82.74        40.15         47.59
20641>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
20642>      RUNOFF COEFFICIENT   =       0.98         0.47          0.56
20643>
20644> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
20645> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
20646>               YOU SHOULD CONSIDER SPLITTING THE AREA.
20647>
20648>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20649>             CN*  =  76.7    Ia = Dep. Storage  (Above)
20650>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20651>            THAN THE STORAGE COEFFICIENT.
20652>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20653>
20654> ------------------------------------------------------------------------------
20655>
20656> --------------------
20657> | ADD HYD  ( 50500)|
20658> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
20659> --------------------          (ha)    (cms)    (hrs)     (mm)
20660>         ID1= 1 ( 40500):     9.32   1.272     6.00    47.59
20661>       + ID2= 2 ( 50810):  1180.48  54.055     6.92    61.62
20662>         ================================================
20663>         ID = 3 ( 50500):  1189.81  54.234     6.92    61.51
20664>
20665>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20666> ------------------------------------------------------------------------------
20667> --------------------
20668> | CALIB            |
20669> | NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
20670> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
20671> --------------------   U.H. Tp(hrs)=   0.23
20672>
20673>      Unit Hyd Qpeak  (cms)=   0.154
20674>
20675>      PEAK FLOW       (cms)=   0.132 (i)
20676>      TIME TO PEAK    (hrs)=   6.083
20677>      RUNOFF VOLUME    (mm)=  51.439
20678>      TOTAL RAINFALL   (mm)=  84.737
20679>      RUNOFF COEFFICIENT   =   0.607
20680>
20681>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20682>
20683> ------------------------------------------------------------------------------
20684> --------------------
20685> | CALIB            |
20686> | STANDHYD (******)|   Area    (ha)=   3.93
20687> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
20688> --------------------
20689>                              IMPERVIOUS    PERVIOUS (i)
20690>      Surface Area     (ha)=       3.89         0.04
20691>      Dep. Storage     (mm)=       2.00         4.48
20692>      Average Slope     (%)=       0.40         1.00
20693>      Length            (m)=     115.50         0.00
20694>      Mannings n           =      0.013        0.030
20695>
20696>      Max.Eff.Inten.(mm/hr)=     111.66        83.83
20697>                  over (min)        5.00         5.00
20698>      Storage Coeff.  (min)=       3.51 (ii)    3.51 (ii)
20699>      Unit Hyd. Tpeak (min)=       5.00         5.00
20700>      Unit Hyd. peak  (cms)=       0.26         0.26
20701>                                                          *TOTALS*
20702>      PEAK FLOW       (cms)=       1.20         0.01          1.205 (iii)
20703>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
20704>      RUNOFF VOLUME    (mm)=      82.74        51.50         82.42
20705>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
20706>      RUNOFF COEFFICIENT   =       0.98         0.61          0.97
20707>
20708> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
20709>
20710>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20711>             CN*  =  85.0    Ia = Dep. Storage  (Above)
20712>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20713>            THAN THE STORAGE COEFFICIENT.
20714>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20715>
20716> ------------------------------------------------------------------------------
20717> --------------------
20718> | CALIB            |
20719> | STANDHYD (******)|   Area    (ha)=   0.45
20720> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
20721> --------------------
20722>                              IMPERVIOUS    PERVIOUS (i)
20723>      Surface Area     (ha)=       0.45         0.00
20724>      Dep. Storage     (mm)=       2.00         4.48
20725>      Average Slope     (%)=       0.40         1.00
20726>      Length            (m)=      48.30         0.00
20727>      Mannings n           =      0.013        0.030
20728>
20729>      Max.Eff.Inten.(mm/hr)=     111.66        83.83
20730>                  over (min)        5.00         5.00
20731>      Storage Coeff.  (min)=       2.08 (ii)    2.08 (ii)
20732>      Unit Hyd. Tpeak (min)=       5.00         5.00
20733>      Unit Hyd. peak  (cms)=       0.31         0.31
20734>                                                          *TOTALS*
20735>      PEAK FLOW       (cms)=       0.14         0.00          0.139 (iii)
20736>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
20737>      RUNOFF VOLUME    (mm)=      82.74        51.50         82.42
20738>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
20739>      RUNOFF COEFFICIENT   =       0.98         0.61          0.97
20740>
20741> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
20742>
20743>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20744>             CN*  =  85.0    Ia = Dep. Storage  (Above)
20745>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20746>            THAN THE STORAGE COEFFICIENT.
20747>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20748>
20749> ------------------------------------------------------------------------------
20750> --------------------
20751> | CALIB            |
20752> | STANDHYD (******)|   Area    (ha)=  26.50
20753> |ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
20754> --------------------
20755>                              IMPERVIOUS    PERVIOUS (i)
20756>      Surface Area     (ha)=      13.25        13.25
20757>      Dep. Storage     (mm)=       2.00         4.48
20758>      Average Slope     (%)=       2.00         2.00
20759>      Length            (m)=     420.00        30.00
20760>      Mannings n           =      0.013        0.025
20761>
20762>      Max.Eff.Inten.(mm/hr)=     111.66       130.11
20763>                  over (min)        5.00        10.00
20764>      Storage Coeff.  (min)=       4.70 (ii)    6.45 (ii)
20765>      Unit Hyd. Tpeak (min)=       5.00        10.00
20766>      Unit Hyd. peak  (cms)=       0.22         0.14
20767>                                                          *TOTALS*
20768>      PEAK FLOW       (cms)=       2.40         4.10          6.496 (iii)
20769>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
20770>      RUNOFF VOLUME    (mm)=      82.74        58.55         65.80
20771>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
20772>      RUNOFF COEFFICIENT   =       0.98         0.69          0.78
20773>
20774> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
20775>
20776>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
20777>             CN*  =  85.0    Ia = Dep. Storage  (Above)
20778>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
20779>            THAN THE STORAGE COEFFICIENT.
20780>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20781>
20782> ------------------------------------------------------------------------------
20783> --------------------
20784> | RESERVOIR(******)|     OVERFLOW IS ON
20785> | IN= 2---> OUT= 1 |
20786> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
20787> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
20788>                            0.0000      0.0000  |    1.8600      0.9862
20789>                            0.0560      0.3250  |    2.1000      1.0580
20790>                            0.2600      0.4718  |    2.2000      1.2000
20791>                            0.7400      0.6512  |   10.0000      1.2500
20792>                            1.4100      0.8427  |    0.0000      0.0000
20793>
20794>                                  AREA     QPEAK     TPEAK       R.V.
20795>                                  (ha)     (cms)     (hrs)       (mm)
20796>    INFLOW : ID= 2 (******)     26.500     6.496      6.00      65.80
20797>    OUTFLOW: ID= 1 (******)     26.500     1.698      6.25      65.75
20798>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
20799>
20800>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
20801>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
20802>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
20803>
20804>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 26.13
20805>                    TIME SHIFT OF PEAK FLOW          (min)= 15.00
20806>                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.9350
20807>
20808> ------------------------------------------------------------------------------
```

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20809>
20810>   --------------------------
20811>   | Junction Command(30651006) |
20812>   --------------------------
20813>
20814>                             AREA     QPEAK   TPEAK     R.V.
20815>                             (ha)     (cms)    (hrs)    (mm)
20816>   INFLOW : ID= 3(30651003)    0.00     0.00    0.00     0.00
20817>   OUTFLOW: ID= 2(30651006)    0.00     0.00    0.00     0.00
20818>
20819>   ---------------------------------------------------------------------------
20820>
20821> --------------------
20822> | ADD HYD  (******)|
20823> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
20824> --------------------          (ha)    (cms)    (hrs)     (mm)
20825> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
20826> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
20827>         ID1= 1 (******):    26.50   1.698     6.25    65.75
20828>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
20829>         ================================================
20830>         ID = 3 (******):    26.50   1.698     6.25    65.75
20831>
20832>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20833> ---------------------------------------------------------------------------
20834>
20835> --------------------
20836> | ADD HYD  (******)|
20837> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
20838> --------------------          (ha)    (cms)    (hrs)     (mm)
20839>         ID1= 3 (******):    26.50   1.698     6.25    65.75
20840>       + ID2= 2 (******):     0.93   0.132     6.08    51.44
20841>         ================================================
20842>         ID = 1 (******):    27.43   1.801     6.25    65.26
20843>
20844>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20845> ---------------------------------------------------------------------------
20846>
20847> --------------------
20848> | ADD HYD  (******)|
20849> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
20850> --------------------          (ha)    (cms)    (hrs)     (mm)
20851>         ID1= 1 (******):    27.43   1.801     6.25    65.26
20852>       + ID2= 2 (******):     3.93   1.205     6.00    82.42
20853>         ================================================
20854>         ID = 3 (******):    31.36   2.323     6.00    67.41
20855>
20856>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20857> ---------------------------------------------------------------------------
20858>
20859> --------------------
20860> | ADD HYD  (******)|
20861> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
20862> --------------------          (ha)    (cms)    (hrs)     (mm)
20863>         ID1= 3 (******):    31.36   2.323     6.00    67.41
20864>       + ID2= 2 (******):     0.45   0.139     6.00    82.42
20865>         ================================================
20866>         ID = 1 (******):    31.81   2.463     6.00    67.63
20867>
20868>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20869> ---------------------------------------------------------------------------
20870> --------------------
20871> | CALIB            |
20872> | NASHYD   (******)|   Area     (ha)=  14.62   Curve Number    (CN)= 85.0
20873> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
20874> --------------------   U.H. Tp(hrs)=   0.45
20875>
20876>      Unit Hyd Qpeak  (cms)=   1.241
20877>
20878>      PEAK FLOW       (cms)=   1.308 (i)
20879>      TIME TO PEAK    (hrs)=   6.333
20880>      RUNOFF VOLUME    (mm)=  51.492
20881>      TOTAL RAINFALL   (mm)=  84.737
20882>      RUNOFF COEFFICIENT   =   0.608
20883>
20884>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
20885>
20886> ---------------------------------------------------------------------------
20887>
20888> --------------------
20889> | ADD HYD  (******)|
20890> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
20891> --------------------          (ha)    (cms)    (hrs)     (mm)
20892>         ID1= 1 (******):    14.62   1.308     6.33    51.49
20893>       + ID2= 2 (******):    31.81   2.463     6.00    67.63
20894>         ================================================
20895>         ID = 3 (******):    46.43   3.292     6.25    62.55
20896>
20897>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
20898> ---------------------------------------------------------------------------
20899> --------------------
20900> | ROUTE CHN(******)|
20901> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
20902> --------------------
20903>                <------ DATA FOR SECTION (   1.1) ------>
20904>                Distance      Elevation       Manning
20905>                    0.00        443.75        0.0450
20906>                    8.50        443.74        0.0450
20907>                   35.47        443.64        0.0450
20908>                   64.60        443.29        0.0450
20909>                   74.71        443.18        0.0450
20910>                   80.25        443.17        0.0450
20911>                  112.17        443.12    0.0450 /0.0350  Main Channel
20912>                  131.57        442.76        0.0350      Main Channel
20913>                  137.50        442.66        0.0350      Main Channel
20914>                  137.91        442.67        0.0350      Main Channel
20915>                  152.28        442.24        0.0350      Main Channel
20916>                  167.40        441.39        0.0350      Main Channel
20917>                  178.29        441.56        0.0350      Main Channel
20918>                  216.75        442.01        0.0350      Main Channel
20919>                  221.54        442.05    0.0350 /0.0450  Main Channel
20920>                  334.66        442.50        0.0450
20921>
20922>       <---------------------- TRAVEL TIME TABLE ---------------------->
20923>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
20924>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
20925>         0.05  441.45    .114E+03       0.0          0.27       55.89
20926>         0.11  441.50    .457E+03       0.2          0.43       35.21
20927>         0.16  441.56    .103E+04       0.6          0.57       26.87
20928>         0.22  441.61    .185E+04       1.4          0.67       22.84
20929>         0.27  441.67    .297E+04       2.5          0.77       19.84
20930>         0.33  441.72    .437E+04       4.1          0.87       17.59
20931>         0.38  441.78    .605E+04       6.4          0.96       15.85
20932>         0.44  441.83    .802E+04       9.2          1.05       14.47
20933>         0.49  441.89    .103E+05      12.8          1.14       13.35
20934>         0.55  441.94    .128E+05      17.2          1.23       12.42
20935>         0.60  442.00    .157E+05      22.4          1.31       11.63
20936>         0.66  442.05    .188E+05      28.3          1.38       11.07
20937>         0.71  442.11    .225E+05      36.9          1.50       10.16
20938>         0.78  442.17    .277E+05      48.4          1.60        9.54
20939>         0.84  442.24    .339E+05      61.9          1.67        9.13
20940>         0.91  442.30    .412E+05      77.1          1.71        8.90
20941>         0.97  442.36    .495E+05      94.7          1.75        8.71
20942>         1.03  442.43    .589E+05     114.9          1.79        8.54
20943>         1.10  442.49    .693E+05     137.9          1.82        8.38
20944>
20945>                                    <---- hydrograph ---->   <-pipe / channel->
20946>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
20947>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
20948>    INFLOW : ID= 2 (******)   46.43     3.29    6.25  62.55      0.30      0.81
20949>    OUTFLOW: ID= 1 (******)   46.43     2.89    6.50  62.54      0.29      0.79
20950>
20951>
20952>
20953> ---------------------------------------------------------------------------
20954> --------------------
20955> | DIVERTHYD(******)|
20956> | IN= 1   # OUT= 5 |
20957> --------------------
20958>      Outflow / Inflow  Relationships
20959>
20960>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
20961>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
20962>         0.00     0.00     0.00     0.00     0.00     0.00
20963>         0.92     0.00     0.00     0.00     0.00     0.92
20964>         1.00     0.73     0.00     0.00     0.00     1.73
20965>         1.00     1.11     0.00     0.00     0.00     2.11
20966>         1.00     1.60     0.00     0.00     0.00     2.60
20967>         1.00     2.08     0.00     0.00     0.00     3.08
20968>         1.00     2.63     0.00     0.00     0.00     3.63
20969>         1.00     4.53     0.00     0.00     0.00     5.53
20970>
20971>                              AREA     QPEAK     TPEAK     R.V.
20972>                              (ha)     (cms)     (hrs)     (mm)
20973>      TOTAL HYD.(ID= 1):     46.43      2.89      6.50    62.54
20974>      ==================================================
20975>      ID= 2  (   2)    :     33.84      1.00      6.50    62.54
20976>      ID= 3  (   2)    :     12.59      1.89      6.50    62.54
20977>      ID= 4  (   2)    :      0.00      0.00      0.00     0.00
20978>      ID= 5  (   2)    :      0.00      0.00      0.00     0.00
20979>      ID= 6  (   2)    :      0.00      0.00      0.00     0.00
20980> ---------------------------------------------------------------------------
20981> --------------------
20982> | ROUTE CHN(******)|
20983> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
20984> --------------------
20985>                <------ DATA FOR SECTION (   1.1) ------>
20986>                Distance      Elevation       Manning
20987>                    0.00        443.75        0.0000
20988>                    8.50        443.74        0.0450
20989>                   35.47        443.64        0.0450
20990>                   64.60        443.29        0.0450
20991>                   74.71        443.18        0.0450
20992>                   80.25        443.17        0.0450
20993>                  112.17        443.12    0.0450 /0.0350  Main Channel
20994>                  131.57        442.76        0.0350      Main Channel
20995>                  137.50        442.66        0.0350      Main Channel
20996>                  137.91        442.67        0.0350      Main Channel
20997>                  152.28        442.24        0.0350      Main Channel
20998>                  167.40        441.39        0.0350      Main Channel
20999>                  178.29        441.56        0.0350      Main Channel
21000>                  216.75        442.01        0.0350      Main Channel
21001>                  221.54        442.05    0.0350 /0.0450  Main Channel
21002>                  334.66        442.50        0.0450
21003>
21004>       <---------------------- TRAVEL TIME TABLE ---------------------->
21005>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
21006>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
21007>         0.05  441.45    .128E+03       0.0          0.29       60.12
21008>         0.11  441.50    .514E+03       0.2          0.45       37.87
21009>         0.16  441.56    .116E+04       0.7          0.59       28.90
21010>         0.22  441.61    .208E+04       1.4          0.70       24.57
21011>         0.27  441.67    .333E+04       2.6          0.80       21.34
21012>         0.33  441.72    .490E+04       4.3          0.91       18.92
21013>         0.38  441.78    .680E+04       6.6          1.01       17.05
21014>         0.44  441.83    .901E+04       9.6          1.10       15.57
21015>         0.49  441.89    .115E+05      13.4          1.19       14.36
21016>         0.55  441.94    .144E+05      18.0          1.28       13.36
21017>         0.60  442.00    .176E+05      23.4          1.37       12.51
21018>         0.66  442.05    .211E+05      29.5          1.44       11.91
21019>         0.71  442.11    .253E+05      38.5          1.57       10.93
21020>         0.78  442.17    .311E+05      50.5          1.67       10.26
21021>         0.84  442.24    .381E+05      64.7          1.74        9.82
21022>         0.91  442.30    .463E+05      80.5          1.79        9.57
21023>         0.97  442.36    .556E+05      98.9          1.83        9.37
21024>         1.03  442.43    .661E+05     120.0          1.86        9.19
21025>         1.10  442.49    .779E+05     144.1          1.90        9.01
21026>
21027>                                    <---- hydrograph ---->   <-pipe / channel->
21028>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
21029>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
21030>    INFLOW : ID= 2 (******)   33.84     1.00    6.50  62.54      0.19      0.64
21031>    OUTFLOW: ID= 1 (******)   33.84     0.98    7.42  62.54      0.19      0.63
21032>
21033>
21034>
21035> ---------------------------------------------------------------------------
21036> --------------------
21037> | CALIB            |
21038> | NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
21039> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
21040> --------------------   U.H. Tp(hrs)=   0.46
21041>
21042>      Unit Hyd Qpeak  (cms)=   0.352
21043>
21044>      PEAK FLOW       (cms)=   0.374 (i)
21045>      TIME TO PEAK    (hrs)=   6.333
21046>      RUNOFF VOLUME    (mm)=  51.493
21047>      TOTAL RAINFALL   (mm)=  84.737
21048>      RUNOFF COEFFICIENT   =   0.608
21049>
21050>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21051>
21052> ---------------------------------------------------------------------------
21053>
21054> --------------------
21055> | ADD HYD  (******)|
21056> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21057> --------------------          (ha)    (cms)    (hrs)     (mm)
21058>         ID1= 1 (******):     4.24   0.374     6.33    51.49
21059>       + ID2= 2 (******):    33.84   0.984     7.42    62.54
21060>         ================================================
21061>         ID = 3 (******):    38.08   1.204     6.58    61.31
21062>
21063>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21064> ---------------------------------------------------------------------------
21065> --------------------
21066> | CALIB            |
21067> | NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
21068> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
21069> --------------------   U.H. Tp(hrs)=   0.29
21070>
21071>      Unit Hyd Qpeak  (cms)=   0.341
21072>
21073>      PEAK FLOW       (cms)=   0.314 (i)
21074>      TIME TO PEAK    (hrs)=   6.167
21075>      RUNOFF VOLUME    (mm)=  51.473
21076>      TOTAL RAINFALL   (mm)=  84.737
21077>      RUNOFF COEFFICIENT   =   0.607
21078>
21079>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21080>
21081> ---------------------------------------------------------------------------
21082>
21083> --------------------
21084> | ADD HYD  (******)|
21085> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21086> --------------------          (ha)    (cms)    (hrs)     (mm)
21087>         ID1= 1 (******):     2.59   0.314     6.17    51.47
21088>       + ID2= 2 (******):    38.08   1.204     6.58    61.31
21089>         ================================================
21090>         ID = 3 (******):    40.67   1.408     6.33    60.68
21091>
21092>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21093> ---------------------------------------------------------------------------
21094> --------------------
21095> | ROUTE CHN(******)|
21096> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
21097> --------------------
21098>                <------ DATA FOR SECTION (   1.1) ------>
21099>                Distance      Elevation       Manning
21100>                    0.00        429.12        0.0500
21101>                   37.54        428.86        0.0500
21102>                   53.31        428.70        0.0500
21103>                   81.17        428.24        0.0500
21104>                   99.28        428.15    0.0500 /0.0300  Main Channel
21105>                  114.53        427.72        0.0300      Main Channel
21106>                  119.88        426.51        0.0300      Main Channel
21107>                  124.17        425.84        0.0300      Main Channel
21108>                  206.01        425.90        0.0300      Main Channel
21109>                  209.64        426.51        0.0300      Main Channel
21110>                  214.21        426.89        0.0300      Main Channel
21111>                  231.49        427.17        0.0300      Main Channel
21112>                  268.61        427.89    0.0300 /0.0500  Main Channel
21113>                  351.58        428.15        0.0500
21114>                  368.27        428.31        0.0500
```

```
                405.75        428.52        0.0500
                416.79        428.59        0.0500
                440.06        428.76        0.0500
                469.88        428.97        0.0500

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16  426.00    .187E+04        9.2         0.88       3.40
        0.31  426.16    .424E+04       35.4         1.49       2.00
        0.47  426.32    .666E+04       74.1         1.98       1.50
        0.63  426.47    .914E+04      123.7         2.41       1.23
        0.79  426.63    .117E+05      182.8         2.79       1.07
        0.94  426.79    .143E+05      251.2         3.13       0.95
        1.10  426.95    .170E+05      323.1         3.39       0.88
        1.26  427.10    .199E+05      394.0         3.52       0.84
        1.42  427.26    .232E+05      479.1         3.69       0.81
        1.57  427.42    .267E+05      577.3         3.86       0.77
        1.73  427.58    .304E+05      687.4         4.03       0.74
        1.89  427.73    .344E+05      808.6         4.20       0.71
        2.05  427.89    .387E+05      927.4         4.28       0.70
        2.23  428.07    .449E+05     1119.2         4.45       0.67
        2.41  428.25    .531E+05     1356.2         4.56       0.65
        2.59  428.43    .627E+05     1638.9         4.66       0.64
        2.77  428.61    .737E+05     1955.8         4.73       0.63
        2.95  428.79    .859E+05     2310.2         4.79       0.62
        3.13  428.97    .996E+05     2701.5         4.84       0.61

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   40.67     1.41    6.33  60.68      0.02      0.88
   OUTFLOW: ID= 1 (******)   40.67     1.40    6.42  60.68      0.02      0.88


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.070 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.376
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  11.13   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.42

     Unit Hyd Qpeak  (cms)=   1.012

     PEAK FLOW       (cms)=   1.044 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  51.491
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.110 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.428
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area     (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      54.14        24.23
     Dep. Storage     (mm)=       2.00         5.78
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     722.82        47.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=     111.66       116.51
                   over (min)       10.00        20.00
     Storage Coeff.  (min)=       8.26 (ii)   16.99 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.13         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=      11.41         4.16        14.424 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      82.74        50.70        68.72
     TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
     RUNOFF COEFFICIENT   =       0.98         0.60         0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        144.07        0.0450
                   9.00        143.84        0.0450
                  12.00        142.90        0.0450
                  15.00        142.48        0.0450
                  18.00        142.43    0.0450 /0.0350  Main Channel
                  21.00        142.31        0.0350      Main Channel
                  24.00        142.12        0.0350      Main Channel
                  27.00        142.44    0.0350 /0.0450  Main Channel
                  30.00        142.71        0.0450
                  33.00        143.18        0.0450
                  36.00        143.27        0.0450
                  37.00        143.36        0.0450
                  38.00        143.64        0.0450
                  39.00        143.92        0.0450
                  40.00        143.93        0.0450
                  45.00        144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08  142.20    .282E+02        0.0         0.24      26.26
        0.16  142.27    .113E+03        0.1         0.38      16.54
        0.23  142.35    .257E+03        0.3         0.48      13.09
        0.31  142.43    .477E+03        0.7         0.57      11.02
        0.42  142.54    .969E+03        2.0         0.76       8.24
        0.53  142.65    .157E+04        3.8         0.92       6.80
        0.64  142.76    .224E+04        6.3         1.06       5.90
        0.75  142.87    .299E+04        9.5         1.19       5.26
        0.86  142.98    .379E+04       13.2         1.31       4.77
        0.97  143.09    .463E+04       17.6         1.43       4.37
        1.08  143.20    .552E+04       22.5         1.53       4.09
        1.19  143.31    .653E+04       27.9         1.60       3.90
        1.30  143.42    .761E+04       34.4         1.70       3.69
        1.41  143.53    .874E+04       41.7         1.79       3.49
        1.52  143.64    .989E+04       49.7         1.89       3.32
        1.63  143.75    .111E+05       58.3         1.98       3.17
        1.74  143.85    .123E+05       66.9         2.04       3.06
        1.85  143.96    .137E+05       73.2         2.01       3.11
        1.96  144.07    .153E+05       81.5         2.00       3.13

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40600)   78.37    14.42    6.00  68.72      0.89      1.34
   OUTFLOW: ID= 1 ( 60600)   78.37    13.97    6.08  68.72      0.88      1.33


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| CALIB            |
| STANDHYD ( 40610)|   Area     (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75         2.18
     Dep. Storage     (mm)=       2.00         8.00
     Average Slope     (%)=       2.90         2.90
     Length            (m)=     162.03        40.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=     111.66        89.64
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.59 (ii)   10.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.39         0.36         0.704 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      82.74        43.65        56.01
     TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
     RUNOFF COEFFICIENT   =       0.98         0.52         0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40610):     3.94    0.704     6.00    56.01
     + ID2= 2 ( 60600):    78.37   13.972     6.08    68.72
       ================================================
       ID = 3 ( 50600):    82.31   14.434     6.08    68.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        143.40        0.0450
                   2.00        142.92        0.0450
                   4.00        142.14        0.0450
                   6.00        141.49        0.0450
                   8.00        141.11        0.0450
                  10.00        141.00    0.0450 /0.0350  Main Channel
                  12.00        140.98        0.0350      Main Channel
                  14.00        140.82        0.0350      Main Channel
                  16.00        141.02    0.0350 /0.0450  Main Channel
                  18.00        141.19        0.0450
                  20.00        141.19        0.0450
                  22.00        141.44        0.0450
                  24.00        142.00        0.0450
                  26.00        142.20        0.0450
                  28.00        142.39        0.0450
                  30.00        142.96        0.0450
                  31.00        143.13        0.0450
                  32.00        143.28        0.0450
                  33.00        143.41        0.0450
                  34.00        143.44        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  140.91    .314E+02        0.0         0.24      23.12
        0.18  141.00    .132E+03        0.1         0.31      17.83
        0.33  141.14    .502E+03        0.9         0.58       9.54
        0.47  141.29    .107E+04        2.4         0.74       7.47
        0.61  141.43    .175E+04        4.7         0.89       6.20
        0.75  141.57    .251E+04        7.9         1.05       5.31
        0.89  141.71    .332E+04       11.8         1.19       4.68
        1.03  141.85    .416E+04       16.5         1.32       4.21
        1.17  141.99    .506E+04       21.8         1.44       3.86
        1.31  142.13    .601E+04       27.5         1.52       3.64
        1.45  142.27    .705E+04       34.0         1.61       3.46
        1.59  142.41    .818E+04       41.5         1.69       3.29
        1.73  142.55    .936E+04       50.2         1.79       3.11
        1.88  142.69    .106E+05       59.8         1.88       2.95
        2.02  142.84    .118E+05       70.2         1.97       2.81
        2.16  142.98    .132E+05       81.2         2.06       2.70
        2.30  143.12    .145E+05       92.6         2.12       2.61
        2.44  143.26    .159E+05      104.8         2.19       2.54
        2.58  143.40    .174E+05      117.7         2.24       2.47

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50600)   82.31    14.43    6.08  68.11      0.97      1.26
   OUTFLOW: ID= 1 ( 60610)   82.31    13.61    6.17  68.11      0.94      1.23


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| CALIB            |
| STANDHYD ( 40620)|   Area     (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30         1.37
     Dep. Storage     (mm)=       2.00         5.59
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     194.41        43.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     111.66       140.94
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.51 (ii)   10.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.06         0.36         1.383 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      82.74        53.82        71.36
     TOTAL RAINFALL   (mm)=      84.74        84.74        84.74
     RUNOFF COEFFICIENT   =       0.98         0.64         0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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```
21421>             CN*  =  79.0    Ia = Dep. Storage  (Above)
21422>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
21423>            THAN THE STORAGE COEFFICIENT.
21424>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21425>
21426> ------------------------------------------------------------------------------
21427>
21428> --------------------
21429> | ADD HYD  ( 50610)|
21430> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21431> --------------------         (ha)    (cms)    (hrs)     (mm)
21432>         ID1= 1 ( 40620):     5.67   1.383     6.00    71.36
21433>       + ID2= 2 ( 60610):    82.31  13.608     6.17    68.11
21434>         ====================================================
21435>         ID = 3 ( 50610):    87.98  14.137     6.17    68.32
21436>
21437>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21438> ------------------------------------------------------------------------------
21439> --------------------
21440> | ROUTE CHN( 60620)|
21441> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
21442> --------------------
21443>                <------ DATA FOR SECTION (   1.1) ------>
21444>                Distance      Elevation       Manning
21445>                    0.00         142.03        0.0450
21446>                    1.00         141.71        0.0450
21447>                    2.00         141.35        0.0450
21448>                    3.00         141.01        0.0450
21449>                    4.00         140.79        0.0450
21450>                    5.00         140.56        0.0450
21451>                    6.00         140.44        0.0450
21452>                    7.00         140.30    0.0450 /0.0350  Main Channel
21453>                    8.00         140.08        0.0350      Main Channel
21454>                    9.00         139.88        0.0350      Main Channel
21455>                   10.00         139.97        0.0350      Main Channel
21456>                   11.00         140.12        0.0350      Main Channel
21457>                   12.00         140.35    0.0350 /0.0450  Main Channel
21458>                   13.00         140.52        0.0450
21459>                   14.00         140.73        0.0450
21460>                   15.00         140.97        0.0450
21461>                   16.00         141.27        0.0450
21462>                   17.00         141.57        0.0450
21463>                   18.00         141.89        0.0450
21464>                   19.00         142.07        0.0450
21465>
21466>       <---------------------- TRAVEL TIME TABLE ----------------------->
21467>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
21468>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
21469>         0.10  139.99    .161E+02        0.0         0.36       8.21
21470>         0.21  140.09    .579E+02        0.2         0.59       5.04
21471>         0.31  140.19    .120E+03        0.5         0.78       3.79
21472>         0.42  140.30    .200E+03        1.1         0.95       3.12
21473>         0.53  140.41    .313E+03        2.1         1.18       2.51
21474>         0.65  140.53    .456E+03        3.5         1.36       2.18
21475>         0.76  140.65    .630E+03        5.3         1.50       1.98
21476>         0.88  140.76    .826E+03        7.6         1.63       1.82
21477>         0.99  140.88    .104E+04       10.3         1.75       1.69
21478>         1.11  140.99    .128E+04       13.4         1.87       1.59
21479>         1.23  141.11    .154E+04       17.1         1.98       1.50
21480>         1.34  141.22    .180E+04       21.2         2.09       1.42
21481>         1.46  141.34    .209E+04       25.8         2.20       1.35
21482>         1.57  141.45    .239E+04       30.9         2.30       1.29
21483>         1.69  141.57    .270E+04       36.4         2.40       1.24
21484>         1.80  141.69    .303E+04       42.4         2.49       1.19
21485>         1.92  141.80    .337E+04       48.9         2.58       1.15
21486>         2.04  141.92    .373E+04       55.9         2.67       1.11
21487>         2.15  142.03    .411E+04       63.2         2.74       1.08
21488>
21489>                                    <---- hydrograph ---->   <-pipe / channel->
21490>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
21491>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
21492>    INFLOW : ID= 2 ( 50610)   87.98   14.14    6.17  68.32      1.13      1.89
21493>    OUTFLOW: ID= 1 ( 60620)   87.98   14.29    6.17  68.32      1.14      1.89
21494>
21495>
21496>
21497> ------------------------------------------------------------------------------
21498> --------------------
21499> | CALIB            |
21500> | STANDHYD ( 40640)|   Area    (ha)=   2.13
21501> |ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
21502> --------------------
21503>                              IMPERVIOUS    PERVIOUS (i)
21504>      Surface Area     (ha)=       0.91         1.23
21505>      Dep. Storage     (mm)=       2.00         7.60
21506>      Average Slope     (%)=       1.70         1.70
21507>      Length            (m)=     119.23        45.00
21508>      Mannings n           =      0.015        0.330
21509>
21510>      Max.Eff.Inten.(mm/hr)=     111.66        88.00
21511>                    over (min)        5.00        15.00
21512>      Storage Coeff.  (min)=       2.52 (ii)   12.41 (ii)
21513>      Unit Hyd. Tpeak (min)=       5.00        15.00
21514>      Unit Hyd. peak  (cms)=       0.29         0.08
21515>                                                          *TOTALS*
21516>      PEAK FLOW       (cms)=       0.21         0.19          0.372 (iii)
21517>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
21518>      RUNOFF VOLUME    (mm)=      82.74        44.42          56.52
21519>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
21520>      RUNOFF COEFFICIENT   =       0.98         0.52           0.67
21521>
21522> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
21523>
21524>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
21525>             CN*  =  78.1    Ia = Dep. Storage  (Above)
21526>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
21527>            THAN THE STORAGE COEFFICIENT.
21528>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21529>
21530> ------------------------------------------------------------------------------
21531>
21532> --------------------
21533> | ADD HYD  ( 50630)|
21534> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21535> --------------------         (ha)    (cms)    (hrs)     (mm)
21536>         ID1= 1 ( 40640):     2.13   0.372     6.00    56.52
21537>       + ID2= 2 ( 60620):    87.98  14.285     6.17    68.32
21538>         ====================================================
21539>         ID = 3 ( 50630):    90.11  14.494     6.17    68.04
21540>
21541>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21542> ------------------------------------------------------------------------------
21543> --------------------
21544> | CALIB            |
21545> | STANDHYD ( 40630)|   Area    (ha)=  20.54
21546> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
21547> --------------------
21548>                              IMPERVIOUS    PERVIOUS (i)
21549>      Surface Area     (ha)=      13.13         7.40
21550>      Dep. Storage     (mm)=       2.00         5.95
21551>      Average Slope     (%)=       1.40         1.40
21552>      Length            (m)=     370.01        42.00
21553>      Mannings n           =      0.015        0.270
21554>
21555>      Max.Eff.Inten.(mm/hr)=     111.66       106.00
21556>                    over (min)        5.00        15.00
21557>      Storage Coeff.  (min)=       5.28 (ii)   13.55 (ii)
21558>      Unit Hyd. Tpeak (min)=       5.00        15.00
21559>      Unit Hyd. peak  (cms)=       0.21         0.08
21560>                                                          *TOTALS*
21561>      PEAK FLOW       (cms)=       3.23         1.33          4.398 (iii)
21562>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
21563>      RUNOFF VOLUME    (mm)=      82.74        49.43          66.97
21564>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
21565>      RUNOFF COEFFICIENT   =       0.98         0.58           0.79
21566>
21567>
21568>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
21569>             CN*  =  79.5    Ia = Dep. Storage  (Above)
21570>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
21571>            THAN THE STORAGE COEFFICIENT.
21572>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21573>
21574> ------------------------------------------------------------------------------
21575>
21576> --------------------
21577> | ADD HYD  ( 50640)|
21578> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21579> --------------------         (ha)    (cms)    (hrs)     (mm)
21580>         ID1= 1 ( 40630):    20.54   4.398     6.00    66.97
21581>       + ID2= 2 ( 50630):    90.11  14.494     6.17    68.04
21582>         ====================================================
21583>         ID = 3 ( 50640):   110.65  16.665     6.08    67.84
21584>
21585>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21586> ------------------------------------------------------------------------------
21587> --------------------
21588> | RESERVOIR(******)|     OVERFLOW IS ON
21589> | IN= 2---> OUT= 1 |
21590> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
21591> --------------------      (cms)     (ha.m.)   |    (cms)     (ha.m.)
21592>                            0.0000      0.0000  |    3.4010      4.4390
21593>                            0.0530      0.4910  |    4.8380      5.5060
21594>                            0.0890      0.7040  |    5.8470      5.5380
21595>                            0.2040      1.0890  |    6.5980      5.9190
21596>                            0.3240      1.4800  |    7.2560      6.2250
21597>                            0.3890      1.7490  |    7.9030      6.4820
21598>                            0.4470      1.9970  |    8.4910      6.6820
21599>                            0.5090      2.3490  |   12.0680      7.1150
21600>                            0.7420      2.9150  |   20.0000      7.2000
21601>                            1.7580      3.6690  |    0.0000      0.0000
21602>
21603>                                AREA     QPEAK     TPEAK       R.V.
21604>                                (ha)     (cms)     (hrs)       (mm)
21605>    INFLOW : ID= 2 ( 50640)    110.646    16.665      6.08      67.84
21606>    OUTFLOW: ID= 1 (******)    110.646     3.544      6.92      67.81
21607>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
21608>
21609>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
21610>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
21611>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
21612>
21613>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.27
21614>                    TIME SHIFT OF PEAK FLOW         (min)= 50.00
21615>                    MAXIMUM  STORAGE   USED       (ha.m.)=  4.5456
21616>
21617> ------------------------------------------------------------------------------
21618>
21619>   --------------------------
21620>   | Junction Command(30651005) |
21621>   --------------------------
21622>
21623>                              AREA     QPEAK   TPEAK     R.V.
21624>                              (ha)     (cms)    (hrs)     (mm)
21625>   INFLOW : ID= 3(30651001)    0.00      0.00    0.00      0.00
21626>   OUTFLOW: ID= 2(30651005)    0.00      0.00    0.00      0.00
21627>
21628>   ---------------------------------------------------------------------------
21629>
21630> --------------------
21631> | ADD HYD  (******)|
21632> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21633> --------------------         (ha)    (cms)    (hrs)     (mm)
21634> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
21635> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
21636>         ID1= 1 (******):   110.65   3.544     6.92    67.81
21637>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
21638>         ====================================================
21639>         ID = 3 (******):   110.65   3.544     6.92    67.81
21640>
21641>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21642> ------------------------------------------------------------------------------
21643>
21644> --------------------
21645> | ADD HYD  (******)|
21646> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
21647> --------------------         (ha)    (cms)    (hrs)     (mm)
21648>         ID1= 3 (******):   110.65   3.544     6.92    67.81
21649>       + ID2= 2 (******):     0.75   0.110     6.08    51.43
21650>         ====================================================
21651>         ID = 1 (******):   111.40   3.559     6.92    67.70
21652>
21653>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21654> ------------------------------------------------------------------------------
21655>
21656> --------------------
21657> | ADD HYD  (******)|
21658> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21659> --------------------         (ha)    (cms)    (hrs)     (mm)
21660>         ID1= 1 (******):    11.13   1.044     6.25    51.49
21661>       + ID2= 2 (******):   111.40   3.559     6.92    67.70
21662>         ====================================================
21663>         ID = 3 (******):   122.53   4.200     6.67    66.23
21664>
21665>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21666> ------------------------------------------------------------------------------
21667> --------------------
21668> | ROUTE CHN(******)|
21669> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
21670> --------------------
21671>                <------ DATA FOR SECTION (   1.1) ------>
21672>                Distance      Elevation       Manning
21673>                    0.00         447.10        0.0450
21674>                   42.83         446.80        0.0450
21675>                   42.89         446.80        0.0450
21676>                   43.24         446.79        0.0450
21677>                  122.57         446.48        0.0450
21678>                  154.02         446.22        0.0450
21679>                  191.79         446.32    0.0450 /0.0350  Main Channel
21680>                  199.05         442.27        0.0350      Main Channel
21681>                  199.74         442.33        0.0350      Main Channel
21682>                  212.02         444.19        0.0350      Main Channel
21683>                  232.17         444.54    0.0350 /0.0450  Main Channel
21684>                  348.58         444.42        0.0450
21685>                  359.23         444.30        0.0450
21686>                  381.33         444.03        0.0450
21687>                  483.65         444.18        0.0450
21688>                  548.64         445.87        0.0450
21689>
21690>       <---------------------- TRAVEL TIME TABLE ----------------------->
21691>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
21692>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
21693>         0.19  442.46    .184E+03        0.1         0.65      24.29
21694>         0.38  442.65    .662E+03        0.7         1.01      15.64
21695>         0.57  442.84    .143E+04        2.0         1.31      12.09
21696>         0.76  443.03    .247E+04        4.1         1.57      10.05
21697>         0.95  443.22    .381E+04        7.3         1.81       8.70
21698>         1.14  443.41    .543E+04       11.7         2.04       7.73
21699>         1.33  443.60    .733E+04       17.5         2.26       6.99
21700>         1.52  443.79    .952E+04       24.8         2.46       6.41
21701>         1.71  443.98    .120E+05       33.7         2.66       5.93
21702>         1.89  444.16    .211E+05       47.0         2.11       7.49
21703>         2.08  444.35    .469E+05       73.0         1.47      10.71
21704>         2.27  444.54    .855E+05      117.6         1.30      12.12
21705>         2.46  444.73    .140E+06      240.0         1.62       9.75
21706>         2.65  444.92    .197E+06      400.4         1.92       8.20
21707>         2.84  445.11    .255E+06      595.0         2.21       7.13
21708>         3.03  445.30    .314E+06      821.8         2.48       6.37
21709>         3.22  445.49    .374E+06     1079.2         2.73       5.78
21710>         3.41  445.68    .436E+06     1366.3         2.96       5.32
21711>         3.60  445.87    .500E+06     1682.3         3.19       4.95
21712>
21713>                                    <---- hydrograph ---->   <-pipe / channel->
21714>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
21715>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
21716>    INFLOW : ID= 2 (******)  122.53    4.20    6.67  66.23      0.76      1.58
21717>    OUTFLOW: ID= 1 (******)  122.53    4.10    6.83  66.23      0.76      1.57
21718>
21719>
21720>
21721> ------------------------------------------------------------------------------
21722> --------------------
21723> | CALIB            |
21724> | NASHYD   (******)|   Area    (ha)=   1.05   Curve Number   (CN)= 85.0
21725> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
21726> --------------------   U.H. Tp(hrs)=   0.23
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21727>
21728>      Unit Hyd Qpeak  (cms)=   0.174
21729>
21730>      PEAK FLOW       (cms)=   0.149 (i)
21731>      TIME TO PEAK    (hrs)=   6.083
21732>      RUNOFF VOLUME    (mm)=  51.439
21733>      TOTAL RAINFALL   (mm)=  84.737
21734>      RUNOFF COEFFICIENT   =   0.607
21735>
21736>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21737>
21738> ------------------------------------------------------------------------------
21739> --------------------
21740> | CALIB            |
21741> | NASHYD   (******)|   Area     (ha)=   1.10   Curve Number   (CN)= 85.0
21742> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
21743> --------------------   U.H. Tp(hrs)=   0.24
21744>
21745>      Unit Hyd Qpeak  (cms)=   0.175
21746>
21747>      PEAK FLOW       (cms)=   0.152 (i)
21748>      TIME TO PEAK    (hrs)=   6.083
21749>      RUNOFF VOLUME    (mm)=  51.448
21750>      TOTAL RAINFALL   (mm)=  84.737
21751>      RUNOFF COEFFICIENT   =   0.607
21752>
21753>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21754>
21755> ------------------------------------------------------------------------------
21756> --------------------
21757> | CALIB            |
21758> | STANDHYD (******)|   Area     (ha)=   2.99
21759> |ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
21760> --------------------
21761>                              IMPERVIOUS    PERVIOUS (i)
21762>      Surface Area     (ha)=       1.50         1.50
21763>      Dep. Storage     (mm)=       2.00         4.13
21764>      Average Slope     (%)=       1.00        20.00
21765>      Length            (m)=      15.00        15.00
21766>      Mannings n            =      0.013        0.025
21767>
21768>      Max.Eff.Inten.(mm/hr)=     111.66       200.29
21769>                   over (min)        5.00         5.00
21770>      Storage Coeff.  (min)=       0.78 (ii)    3.04 (ii)
21771>      Unit Hyd. Tpeak (min)=       5.00         5.00
21772>      Unit Hyd. peak  (cms)=       0.34         0.27
21773>                                                          *TOTALS*
21774>      PEAK FLOW       (cms)=       0.01         0.83          0.843 (iii)
21775>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
21776>      RUNOFF VOLUME    (mm)=      82.74        65.98          66.15
21777>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
21778>      RUNOFF COEFFICIENT   =       0.98         0.78           0.78
21779>
21780> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
21781> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
21782>               YOU SHOULD CONSIDER SPLITTING THE AREA.
21783>
21784>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
21785>             CN*  =  86.0    Ia = Dep. Storage  (Above)
21786>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
21787>            THAN THE STORAGE COEFFICIENT.
21788>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21789>
21790> ------------------------------------------------------------------------------
21791> --------------------
21792> | CALIB            |
21793> | STANDHYD (******)|   Area     (ha)=  17.55
21794> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
21795> --------------------
21796>                              IMPERVIOUS    PERVIOUS (i)
21797>      Surface Area     (ha)=      14.39         3.16
21798>      Dep. Storage     (mm)=       2.00         4.13
21799>      Average Slope     (%)=       1.00         2.00
21800>      Length            (m)=      30.00        30.00
21801>      Mannings n            =      0.013        0.025
21802>
21803>      Max.Eff.Inten.(mm/hr)=     111.66       350.13
21804>                   over (min)        5.00         5.00
21805>      Storage Coeff.  (min)=       1.19 (ii)    2.21 (ii)
21806>      Unit Hyd. Tpeak (min)=       5.00         5.00
21807>      Unit Hyd. peak  (cms)=       0.33         0.30
21808>                                                          *TOTALS*
21809>      PEAK FLOW       (cms)=       2.23         3.09          5.318 (iii)
21810>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
21811>      RUNOFF VOLUME    (mm)=      82.74        72.52          76.71
21812>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
21813>      RUNOFF COEFFICIENT   =       0.98         0.86           0.91
21814>
21815> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
21816>
21817>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
21818>             CN*  =  86.0    Ia = Dep. Storage  (Above)
21819>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
21820>            THAN THE STORAGE COEFFICIENT.
21821>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21822>
21823> ------------------------------------------------------------------------------
21824>
21825> --------------------
21826> | ADD HYD  (******)|
21827> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21828> --------------------          (ha)    (cms)    (hrs)     (mm)
21829>         ID1= 1 (******):     1.05   0.149     6.08    51.44
21830>       + ID2= 2 (******):     1.10   0.152     6.08    51.45
21831>         ================================================
21832>         ID = 3 (******):     2.15   0.301     6.08    51.44
21833>
21834>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21835> ------------------------------------------------------------------------------
21836>
21837> --------------------
21838> | ADD HYD  (******)|
21839> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
21840> --------------------          (ha)    (cms)    (hrs)     (mm)
21841>         ID1= 3 (******):     2.15   0.301     6.08    51.44
21842>       + ID2= 2 (******):    17.55   5.318     6.00    76.71
21843>         ================================================
21844>         ID = 1 (******):    19.70   5.586     6.00    73.95
21845>
21846>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21847> ------------------------------------------------------------------------------
21848>
21849> --------------------
21850> | ADD HYD  (******)|
21851> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21852> --------------------          (ha)    (cms)    (hrs)     (mm)
21853>         ID1= 1 (******):    19.70   5.586     6.00    73.95
21854>       + ID2= 2 (******):     2.99   0.843     6.00    66.15
21855>         ================================================
21856>         ID = 3 (******):    22.69   6.430     6.00    72.92
21857>
21858>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21859> ------------------------------------------------------------------------------
21860>
21861> --------------------
21862> | ADD HYD  (******)|
21863> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
21864> --------------------          (ha)    (cms)    (hrs)     (mm)
21865>         ID1= 3 (******):    22.69   6.430     6.00    72.92
21866>       + ID2= 2 (******):     0.39   0.327     6.00    73.68
21867>         ================================================
21868>         ID = 1 (******):    23.08   6.757     6.00    72.93
21869>
21870>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21871> ------------------------------------------------------------------------------
21872>
21873> --------------------
21874> | ADD HYD  (******)|
21875> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21876> --------------------          (ha)    (cms)    (hrs)     (mm)
21877>         ID1= 1 (******):    23.08   6.757     6.00    72.93
21878>       + ID2= 2 (******):     0.83   0.727     6.00    76.71
21879>         ================================================
21880>         ID = 3 (******):    23.90   7.484     6.00    73.07
21881>
21882>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21883> ------------------------------------------------------------------------------
21884> --------------------
21885> | RESERVOIR(******)|     OVERFLOW IS ON
21886> | IN= 2---> OUT= 1 |
21887> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
21888> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
21889>                            0.0000      0.0000  |    0.3352      3.1110
21890>                            0.0933      0.5687  |    0.3714      3.8158
21891>                            0.1848      1.1636  |    0.4043      4.5492
21892>                            0.2439      1.7854  |    0.4445      5.5626
21893>                            0.2910      2.4344  |    0.0000      0.0000
21894>
21895>                                  AREA     QPEAK     TPEAK       R.V.
21896>                                  (ha)     (cms)     (hrs)       (mm)
21897>    INFLOW : ID= 2 (******)     23.905     7.484      6.00      73.07
21898>    OUTFLOW: ID= 1 (******)     23.905     0.203      8.08      73.00
21899>    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00
21900>
21901>                   TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
21902>                   CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
21903>                   PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
21904>
21905>                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.71
21906>                   TIME SHIFT OF PEAK FLOW         (min)=125.00
21907>                   MAXIMUM  STORAGE   USED       (ha.m.)=  1.3547
21908>
21909> ------------------------------------------------------------------------------
21910>
21911>   --------------------------
21912>   | Junction Command(30651004) |
21913>   --------------------------
21914>
21915>                              AREA     QPEAK   TPEAK     R.V.
21916>                              (ha)     (cms)    (hrs)     (mm)
21917>   INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
21918>   OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00
21919>
21920>   ---------------------------------------------------------------------------
21921>
21922> --------------------
21923> | ADD HYD  (******)|
21924> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21925> --------------------          (ha)    (cms)    (hrs)     (mm)
21926> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
21927> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
21928>         ID1= 1 (******):    23.90   0.203     8.08    73.00
21929>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
21930>         ================================================
21931>         ID = 3 (******):    23.90   0.203     8.08    73.00
21932>
21933>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21934> ------------------------------------------------------------------------------
21935>
21936> --------------------
21937> | ADD HYD  (******)|
21938> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
21939> --------------------          (ha)    (cms)    (hrs)     (mm)
21940>         ID1= 3 (******):    23.90   0.203     8.08    73.00
21941>       + ID2= 2 (******):     0.45   0.070     6.08    51.38
21942>         ================================================
21943>         ID = 1 (******):    24.35   0.248     6.08    72.60
21944>
21945>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21946> ------------------------------------------------------------------------------
21947>
21948> --------------------
21949> | ADD HYD  (******)|
21950> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21951> --------------------          (ha)    (cms)    (hrs)     (mm)
21952>         ID1= 1 (******):    24.35   0.248     6.08    72.60
21953>       + ID2= 2 (******):   122.53   4.096     6.83    66.23
21954>         ================================================
21955>         ID = 3 (******):   146.88   4.303     6.83    67.28
21956>
21957>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21958> ------------------------------------------------------------------------------
21959> --------------------
21960> | CALIB            |
21961> | NASHYD   (******)|   Area     (ha)=   2.19   Curve Number   (CN)= 85.0
21962> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
21963> --------------------   U.H. Tp(hrs)=   0.27
21964>
21965>      Unit Hyd Qpeak  (cms)=   0.310
21966>
21967>      PEAK FLOW       (cms)=   0.277 (i)
21968>      TIME TO PEAK    (hrs)=   6.083
21969>      RUNOFF VOLUME    (mm)=  51.466
21970>      TOTAL RAINFALL   (mm)=  84.737
21971>      RUNOFF COEFFICIENT   =   0.607
21972>
21973>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
21974>
21975> ------------------------------------------------------------------------------
21976>
21977> --------------------
21978> | ADD HYD  (******)|
21979> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
21980> --------------------          (ha)    (cms)    (hrs)     (mm)
21981>         ID1= 1 (******):     2.19   0.277     6.08    51.47
21982>       + ID2= 2 (******):   146.88   4.303     6.83    67.28
21983>         ================================================
21984>         ID = 3 (******):   149.07   4.371     6.83    67.05
21985>
21986>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
21987> ------------------------------------------------------------------------------
21988> --------------------
21989> | ROUTE CHN(******)|
21990> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
21991> --------------------
21992>                <------ DATA FOR SECTION (   1.1) ------>
21993>               Distance      Elevation       Manning
21994>                   0.00         429.12        0.0450
21995>                  37.54         428.86        0.0450
21996>                  53.31         428.70        0.0450
21997>                  81.17         428.24        0.0450
21998>                  99.28         428.15    0.0450 /0.0350  Main Channel
21999>                 114.53         427.72        0.0350      Main Channel
22000>                 119.88         426.51        0.0350      Main Channel
22001>                 124.17         425.84        0.0350      Main Channel
22002>                 206.01         425.90        0.0350      Main Channel
22003>                 209.64         426.51        0.0350      Main Channel
22004>                 214.21         426.89        0.0350      Main Channel
22005>                 231.49         427.17        0.0350      Main Channel
22006>                 268.61         427.89    0.0350 /0.0450  Main Channel
22007>                 351.58         428.15        0.0450
22008>                 368.27         428.31        0.0450
22009>                 405.75         428.52        0.0450
22010>                 416.79         428.59        0.0450
22011>                 440.06         428.76        0.0450
22012>                 469.88         428.97        0.0450
22013>
22014>       <---------------------- TRAVEL TIME TABLE ---------------------->
22015>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
22016>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
22017>         0.16   426.00    .218E+04       4.1          0.39       8.87
22018>         0.31   426.16    .495E+04      15.8          0.67       5.22
22019>         0.47   426.32    .779E+04      33.2          0.89       3.92
22020>         0.63   426.47    .107E+05      55.4          1.08       3.22
22021>         0.79   426.63    .137E+05      81.8          1.25       2.78
22022>         0.94   426.79    .167E+05     112.4          1.40       2.48
22023>         1.10   426.95    .199E+05     144.6          1.52       2.29
22024>         1.26   427.10    .233E+05     176.4          1.58       2.20
22025>         1.42   427.26    .271E+05     214.5          1.65       2.11
22026>         1.57   427.42    .312E+05     258.4          1.73       2.01
22027>         1.73   427.58    .356E+05     307.7          1.81       1.93
22028>         1.89   427.73    .402E+05     362.0          1.88       1.85
22029>         2.05   427.89    .452E+05     415.1          1.91       1.82
22030>         2.23   428.07    .525E+05     501.3          1.99       1.74
22031>         2.41   428.25    .621E+05     609.1          2.05       1.70
22032>         2.59   428.43    .733E+05     739.1          2.10       1.65
```

```
       2.77   428.61    .862E+05     886.8          2.15       1.62
       2.95   428.79    .101E+06    1053.9          2.19       1.59
       3.13   428.97    .116E+06    1240.2          2.22       1.57

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  149.07     4.37    6.83  67.05      0.16      0.40
   OUTFLOW: ID= 1 (******)  149.07     4.26    7.08  67.05      0.16      0.39


--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):   149.07   4.264     7.08    67.05
      + ID2= 2 (******):    40.67   1.403     6.42    60.68
        ================================================
        ID = 3 (******):   189.74   5.481     7.00    65.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.038 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.263
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.605

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.038     6.00    51.26
      + ID2= 2 (******):    12.59   1.893     6.50    62.54
        ================================================
        ID = 3 (******):    12.81   1.902     6.50    62.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         433.07        0.0450
                 59.66         432.39        0.0450
                 94.25         432.03        0.0450
                115.71         431.82        0.0450
                143.84         431.84    0.0450 /0.0350  Main Channel
                163.59         431.75        0.0350      Main Channel
                177.84         431.73        0.0350      Main Channel
                199.51         431.70        0.0350      Main Channel
                231.74         431.53        0.0350      Main Channel
                283.71         431.44        0.0350      Main Channel
                294.09         431.43        0.0350      Main Channel
                325.65         431.42        0.0350      Main Channel
                355.24         431.24        0.0350      Main Channel
                383.70         431.43        0.0350      Main Channel
                476.17         432.06    0.0350 /0.0450  Main Channel
                510.88         432.23        0.0450
                558.61         432.37        0.0450
                589.84         432.57        0.0450
                622.97         432.73        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   431.32    .108E+03       0.3          0.30       6.68
        0.15   431.39    .434E+03       1.7          0.47       4.21
        0.23   431.47    .119E+04       5.0          0.50       3.99
        0.30   431.54    .252E+04      13.9          0.66       3.02
        0.38   431.62    .417E+04      29.3          0.84       2.37
        0.45   431.69    .604E+04      50.1          0.99       2.01
        0.53   431.77    .828E+04      73.9          1.06       1.87
        0.60   431.84    .109E+05     108.8          1.19       1.67
        0.68   431.92    .142E+05     159.5          1.34       1.48
        0.76   432.01    .176E+05     219.4          1.48       1.34
        0.84   432.09    .213E+05     290.0          1.62       1.22
        0.92   432.17    .252E+05     374.6          1.77       1.12
        1.01   432.25    .293E+05     469.2          1.91       1.04
        1.09   432.33    .338E+05     573.9          2.02       0.98
        1.17   432.41    .386E+05     689.9          2.13       0.93
        1.25   432.49    .435E+05     817.2          2.24       0.89
        1.33   432.57    .487E+05     955.3          2.34       0.85
        1.41   432.65    .541E+05    1103.5          2.43       0.82
        1.49   432.73    .597E+05    1262.7          2.52       0.79

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   12.81     1.90    6.50  62.35      0.15      0.47
   OUTFLOW: ID= 1 (******)   12.81     1.89    6.58  62.35      0.15      0.47


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.078 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.264
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.605

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.432 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  51.483
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.608

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.432     6.17    51.48
      + ID2= 2 (******):     0.45   0.078     6.00    51.26
        ================================================
        ID = 3 (******):     4.32   0.486     6.17    51.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.486     6.17    51.46
      + ID2= 2 (******):    12.81   1.891     6.58    62.35
        ================================================
        ID = 1 (******):    17.13   2.186     6.50    59.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         430.79        0.0450
                 23.82         429.79    0.0450 /0.0350  Main Channel
                 44.05         429.11        0.0350      Main Channel
                 70.46         428.15        0.0350      Main Channel
                112.31         427.60        0.0350      Main Channel
                150.77         427.27        0.0350      Main Channel
                179.17         427.15        0.0350      Main Channel
                214.90         427.16        0.0350      Main Channel
                261.89         427.25        0.0350      Main Channel
                317.65         427.56        0.0350      Main Channel
                382.75         427.99        0.0350      Main Channel
                394.40         428.11        0.0350      Main Channel
                432.80         428.07        0.0350      Main Channel
                432.91         428.07        0.0350      Main Channel
                462.57         428.15        0.0350      Main Channel
                522.90         429.79    0.0350 /0.0450  Main Channel
                585.04         429.90        0.0450
                731.92         430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04      11.5          0.73       2.99
        0.35   427.50    .570E+04      49.9          1.15       1.91
        0.53   427.68    .105E+05     119.2          1.49       1.47
        0.70   427.85    .163E+05     221.8          1.79       1.22
        0.88   428.03    .229E+05     360.8          2.06       1.06
        1.06   428.21    .312E+05     509.7          2.14       1.02
        1.23   428.38    .405E+05     771.0          2.49       0.88
        1.41   428.56    .500E+05    1076.3          2.82       0.77
        1.58   428.73    .598E+05    1423.8          3.12       0.70
        1.76   428.91    .699E+05    1812.5          3.40       0.64
        1.94   429.09    .802E+05    2241.5          3.66       0.60
        2.11   429.26    .907E+05    2709.1          3.91       0.56
        2.29   429.44    .102E+06    3215.8          4.15       0.53
        2.46   429.61    .113E+06    3761.6          4.38       0.50
        2.64   429.79    .124E+06    4346.4          4.59       0.48
        2.85   430.00    .139E+06    5173.9          4.88       0.45
        3.06   430.20    .156E+06    6075.9          5.12       0.43
        3.26   430.41    .173E+06    7054.9          5.33       0.41
        3.47   430.62    .193E+06    8114.3          5.52       0.40

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   17.13     2.19    6.50  59.60      0.03      0.73
   OUTFLOW: ID= 1 (******)   17.13     2.17    6.58  59.60      0.03      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.138 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  51.439
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.607

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.110 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  51.348
     TOTAL RAINFALL   (mm)=  84.737
     RUNOFF COEFFICIENT   =   0.606

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.110     6.00    51.35
      + ID2= 2 (******):     0.97   0.138     6.08    51.44
        ================================================
        ID = 3 (******):     1.66   0.248     6.08    51.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.248     6.08    51.40
      + ID2= 2 (******):    17.13   2.175     6.58    59.60
        ================================================
        ID = 3 (******):    18.79   2.253     6.50    58.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    18.79      2.25      6.50    58.88
     ================================================
     ID= 2  (   2)    :    18.79      2.25      6.50    58.88
     ID= 3  (   2)    :     0.00      0.00      6.50    58.88
     ID= 4  (   2)    :     0.00      0.00      0.00     0.00
```

```
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD (******)|   Area    (ha)=   1.21
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
 --------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.96         0.25
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.64         0.54
      Length            (m)=      63.89       157.20
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=     111.66        83.83
                over (min)        5.00        10.00
      Storage Coeff.  (min)=       2.14 (ii)    5.89 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.31         0.15
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.30         0.05          0.347 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      82.74        51.50          76.17
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.61           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD (******)|   Area    (ha)=   2.90
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
 --------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.32         0.58
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.70         0.60
      Length            (m)=     166.18       124.91
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=     111.66        83.83
                over (min)        5.00        10.00
      Storage Coeff.  (min)=       3.69 (ii)    6.78 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.25         0.14
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.71         0.11          0.824 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      82.74        51.50          76.49
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.61           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.90   0.824     6.00    76.49
      + ID2= 2 (******):     1.21   0.347     6.00    76.17
        ================================================
        ID = 3 (******):     4.11   1.171     6.00    76.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.85     0.00     0.00     0.00     0.00     0.85
       0.85     1.00     0.00     0.00     0.00     1.85
       0.85   100.00     0.00     0.00     0.00   100.85

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    4.11      1.17      6.00   76.40
     ================================================
     ID= 2  (   2)    :   3.84      0.85      6.00   76.40
     ID= 3  (   2)    :   0.27      0.32      6.00   76.40
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000     6.50    58.88
      + ID2= 2 (******):     3.84   0.847     6.00    76.40
        ================================================
        ID = 3 (******):     3.84   0.847     6.00    76.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.00     5.20     0.00     0.00     0.00     5.20
       1.00     5.20     0.00     0.00     0.00     6.20
     100.00     5.20     0.00     0.00     0.00   105.20

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    3.84      0.85      6.00   76.40
     ================================================
     ID= 2  (   2)    :   0.00      0.00      6.00   76.39
     ID= 3  (   2)    :   3.84      0.85      6.00   76.39
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    18.79   2.253     6.50    58.88
      + ID2= 2 (******):     0.00   0.000     6.00    76.39
        ================================================
        ID = 3 (******):    18.79   2.253     6.50    58.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.00     0.00     0.00     0.00     0.00     0.00
       0.01     0.00     0.00     0.00     0.00     0.01
       0.06     0.00     0.00     0.00     0.00     0.06
       0.08     0.00     0.00     0.00     0.00     0.08
       0.12     0.00     0.00     0.00     0.00     0.12
       0.20     0.00     0.00     0.00     0.00     0.20
       0.25     0.00     0.00     0.00     0.00     0.25
       0.30     0.00     0.00     0.00     0.00     0.30
       0.33     0.00     0.00     0.00     0.00     0.33
       0.37     0.00     0.00     0.00     0.00     0.37
       0.39     0.00     0.00     0.00     0.00     0.39
       0.42     1.43     0.00     0.00     0.00     1.85
       0.44     8.83     0.00     0.00     0.00     9.27
       0.47    25.03     0.00     0.00     0.00    25.50
       0.49    52.11     0.00     0.00     0.00    52.61
       0.52    91.81     0.00     0.00     0.00    92.33
       0.53   126.04     0.00     0.00     0.00   126.57

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   18.79      2.25      6.50   58.88
     ================================================
     ID= 2  (   2)    :   7.26      0.42      6.50   58.88
     ID= 3  (   2)    :  11.53      1.83      6.50   58.88
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD (******)|   Area    (ha)=   0.82
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
 --------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.81         0.01
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.50         1.00
      Length            (m)=      18.40         0.10
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=     111.66        83.83
                over (min)        5.00         5.00
      Storage Coeff.  (min)=       1.09 (ii)    1.10 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.34
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.25         0.00          0.254 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      82.74        51.50          82.42
      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
      RUNOFF COEFFICIENT   =       0.98         0.61           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.82   0.254     6.00    82.42
      + ID2= 2 (******):     0.00   0.000     6.50    58.88
        ================================================
        ID = 3 (******):     0.82   0.254     6.00    82.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.82   0.254     6.00    82.42
      + ID2= 2 (******):    11.53   1.834     6.50    58.88
        ================================================
        ID = 1 (******):    12.35   1.869     6.50    60.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.00     0.00     0.00     0.00     0.00     0.00
       0.03     0.00     0.00     0.00     0.00     0.03
       0.04     0.00     0.00     0.00     0.00     0.04
       0.09     0.00     0.00     0.00     0.00     0.09
       0.12     0.00     0.00     0.00     0.00     0.13
       0.20     0.00     0.00     0.00     0.00     0.20
       0.30     0.00     0.00     0.00     0.00     0.30
       0.37     0.00     0.00     0.00     0.00     0.37
       0.43     0.00     0.00     0.00     0.00     0.43
       0.48     0.00     0.00     0.00     0.00     0.48
       0.52     0.00     0.00     0.00     0.00     0.52
       0.57     0.00     0.00     0.00     0.00     0.57
       0.67     0.00     0.00     0.00     0.00     0.67
       0.68     0.00     0.00     0.00     0.00     0.68
       0.68     0.02     0.00     0.00     0.00     0.70
       0.72     0.56     0.00     0.00     0.00     1.28
       0.73     0.75     0.01     0.00     0.00     1.48
       1.10     1.87     0.54     0.00     0.00     3.51
       1.40     2.25     2.61     0.00     0.00     6.26

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   12.35      1.87      6.50   60.44
     ================================================
     ID= 2  (   3)    :   7.65      0.80      6.50   60.44
     ID= 3  (   3)    :   4.42      0.96      6.50   60.44
     ID= 4  (   3)    :   0.27      0.11      6.50   60.44
     ID= 5  (   3)    :   0.00      0.00      0.00    0.00
     ID= 6  (   3)    :   0.00      0.00      0.00    0.00
 ---------------------------------------------------------------------------
```

```
22645>
22646> --------------------
22647> | ADD HYD  (******)|
22648> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22649> --------------------         (ha)    (cms)    (hrs)     (mm)
22650>        ID1= 1 (******):     7.26   0.419     6.50    58.88
22651>      + ID2= 2 (******):     7.65   0.799     6.50    60.44
22652>        ==================================================
22653>        ID = 3 (******):    14.92   1.218     6.50    59.68
22654>
22655>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22656> ------------------------------------------------------------------------------
22657> --------------------
22658> | CALIB            |
22659> | STANDHYD (******)|   Area    (ha)=   8.58
22660> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
22661> --------------------
22662>                              IMPERVIOUS    PERVIOUS (i)
22663>     Surface Area     (ha)=       4.98         3.60
22664>     Dep. Storage     (mm)=       2.00         4.48
22665>     Average Slope     (%)=       0.91         1.12
22666>     Length            (m)=     246.54       157.18
22667>     Mannings n           =      0.015        0.300
22668>
22669>     Max.Eff.Inten.(mm/hr)=     111.66        51.15
22670>                 over (min)        5.00        35.00
22671>     Storage Coeff.  (min)=       4.71 (ii)   32.56 (ii)
22672>     Unit Hyd. Tpeak (min)=       5.00        35.00
22673>     Unit Hyd. peak  (cms)=       0.22         0.03
22674>                                                          *TOTALS*
22675>     PEAK FLOW       (cms)=       1.50         0.30          1.639 (iii)
22676>     TIME TO PEAK    (hrs)=       6.00         6.42           6.00
22677>     RUNOFF VOLUME    (mm)=      82.74        51.50          69.61
22678>     TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
22679>     RUNOFF COEFFICIENT   =       0.98         0.61           0.82
22680>
22681> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
22682>
22683>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22684>           CN*  =  85.0    Ia = Dep. Storage  (Above)
22685>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22686>           THAN THE STORAGE COEFFICIENT.
22687>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22688>
22689> ------------------------------------------------------------------------------
22690>
22691> --------------------
22692> | ADD HYD  ( 50650)|
22693> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22694> --------------------         (ha)    (cms)    (hrs)     (mm)
22695>        ID1= 1 (******):     8.58   1.639     6.00    69.61
22696>      + ID2= 2 (******):   189.74   5.481     7.00    65.69
22697>        ==================================================
22698>        ID = 3 ( 50650):   198.32   5.746     7.00    65.86
22699>
22700>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22701> ------------------------------------------------------------------------------
22702>
22703> --------------------
22704> | ADD HYD  ( 50650)|
22705> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
22706> --------------------         (ha)    (cms)    (hrs)     (mm)
22707>        ID1= 3 ( 50650):   198.32   5.746     7.00    65.86
22708>      + ID2= 2 (******):    14.92   1.218     6.50    59.68
22709>        ==================================================
22710>        ID = 1 ( 50650):   213.24   6.878     7.00    65.42
22711>
22712>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22713> ------------------------------------------------------------------------------
22714> --------------------
22715> | ROUTE CHN( 60650)|
22716> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
22717> --------------------
22718>                <------ DATA FOR SECTION (   1.1) ------>
22719>                Distance      Elevation       Manning
22720>                    0.00         129.45        0.0450
22721>                    6.00         129.24        0.0450
22722>                    8.00         128.92        0.0450
22723>                   10.00         128.26        0.0450
22724>                   12.00         127.37        0.0450
22725>                   14.00         126.79        0.0450
22726>                   16.00         126.20        0.0450
22727>                   18.00         125.80        0.0450
22728>                   21.00         125.29        0.0450
22729>                   24.00         124.85        0.0450
22730>                   27.00         124.54        0.0350      Main Channel
22731>                   30.00         124.62        0.0350      Main Channel
22732>                   33.00         124.84    0.0350 /0.0450  Main Channel
22733>                   36.00         125.26        0.0450
22734>                   39.00         125.86        0.0450
22735>                   42.00         126.49        0.0450
22736>                   48.00         128.97        0.0450
22737>                   54.00         129.42        0.0450
22738>
22739>       <---------------------- TRAVEL TIME TABLE ---------------------->
22740>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
22741>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
22742>         0.26   124.80    .390E+03        0.9         0.76       7.18
22743>         0.51   125.06    .124E+04        4.9         1.29       4.21
22744>         0.77   125.31    .239E+04       12.3         1.67       3.25
22745>         1.03   125.57    .380E+04       23.2         1.99       2.73
22746>         1.28   125.83    .544E+04       37.9         2.27       2.40
22747>         1.54   126.08    .731E+04       56.6         2.52       2.15
22748>         1.80   126.34    .937E+04       79.6         2.77       1.96
22749>         2.05   126.60    .116E+05      107.2         3.01       1.81
22750>         2.31   126.85    .140E+05      139.3         3.25       1.67
22751>         2.57   127.11    .165E+05      175.4         3.47       1.57
22752>         2.82   127.37    .191E+05      215.7         3.68       1.48
22753>         3.08   127.62    .219E+05      261.1         3.89       1.39
22754>         3.34   127.88    .247E+05      310.7         4.10       1.32
22755>         3.59   128.14    .276E+05      364.3         4.30       1.26
22756>         3.85   128.40    .307E+05      421.6         4.48       1.21
22757>         4.11   128.65    .338E+05      482.7         4.65       1.17
22758>         4.36   128.91    .371E+05      548.1         4.82       1.13
22759>         4.62   129.17    .406E+05      600.9         4.83       1.13
22760>         4.88   129.42    .446E+05      634.1         4.63       1.17
22761>
22762>                                    <---- hydrograph ---->   <-pipe / channel->
22763>                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
22764>                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
22765>    INFLOW : ID= 2 ( 50650)  213.24     6.88    7.00  65.42      0.58      1.37
22766>    OUTFLOW: ID= 1 ( 60650)  213.24     6.87    7.00  65.42      0.58      1.37
22767>
22768>
22769>
22770> ------------------------------------------------------------------------------
22771> --------------------
22772> | CALIB            |
22773> | STANDHYD ( 40670)|   Area    (ha)=  50.76
22774> |ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
22775> --------------------
22776>                              IMPERVIOUS    PERVIOUS (i)
22777>     Surface Area     (ha)=      37.06        13.71
22778>     Dep. Storage     (mm)=       2.00         6.10
22779>     Average Slope     (%)=       1.50         1.50
22780>     Length            (m)=     581.73        82.00
22781>     Mannings n           =      0.015        0.280
22782>
22783>     Max.Eff.Inten.(mm/hr)=     111.66        71.03
22784>                 over (min)        5.00        25.00
22785>     Storage Coeff.  (min)=       6.78 (ii)   21.31 (ii)
22786>     Unit Hyd. Tpeak (min)=       5.00        25.00
22787>     Unit Hyd. peak  (cms)=       0.18         0.05
22788>                                                          *TOTALS*
22789>     PEAK FLOW       (cms)=      10.51         1.29         11.278 (iii)
22790>     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
22791>     RUNOFF VOLUME    (mm)=      82.74        43.79          71.83
22792>     TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
22793>     RUNOFF COEFFICIENT   =       0.98         0.52           0.85
22794>
22795>
22796>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22797>           CN*  =  79.5    Ia = Dep. Storage  (Above)
22798>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22799>           THAN THE STORAGE COEFFICIENT.
22800>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22801>
22802> ------------------------------------------------------------------------------
22803>
22804> --------------------
22805> | ADD HYD  ( 50670)|
22806> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22807> --------------------         (ha)    (cms)    (hrs)     (mm)
22808>        ID1= 1 ( 40670):    50.76  11.278     6.00    71.83
22809>      + ID2= 2 ( 60650):   213.24   6.871     7.00    65.42
22810>        ==================================================
22811>        ID = 3 ( 50670):   264.00  14.766     6.00    66.66
22812>
22813>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22814> ------------------------------------------------------------------------------
22815> --------------------
22816> | ROUTE CHN( 60670)|
22817> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
22818> --------------------
22819>                <------ DATA FOR SECTION (   1.1) ------>
22820>                Distance      Elevation       Manning
22821>                    0.00         115.77        0.0450
22822>                   20.00         115.51        0.0450
22823>                   24.00         114.73        0.0450
22824>                   28.00         113.17    0.0450 /0.0350  Main Channel
22825>                   32.00         113.16    0.0350 /0.0450  Main Channel
22826>                   36.00         114.68        0.0450
22827>                   40.00         115.05        0.0450
22828>                   44.00         115.27        0.0450
22829>                   48.00         115.46        0.0450
22830>                   52.00         115.71        0.0450
22831>                   54.00         115.77        0.0450
22832>
22833>       <---------------------- TRAVEL TIME TABLE ---------------------->
22834>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
22835>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
22836>         0.14   113.30    .275E+03        0.3         0.60      13.60
22837>         0.27   113.43    .612E+03        1.2         0.93       8.76
22838>         0.41   113.57    .996E+03        2.4         1.18       6.88
22839>         0.55   113.71    .143E+04        4.1         1.39       5.85
22840>         0.69   113.84    .191E+04        6.1         1.57       5.18
22841>         0.82   113.98    .244E+04        8.6         1.73       4.70
22842>         0.96   114.12    .301E+04       11.6         1.87       4.34
22843>         1.10   114.26    .363E+04       14.9         2.00       4.06
22844>         1.24   114.39    .430E+04       18.8         2.12       3.82
22845>         1.37   114.53    .502E+04       23.1         2.24       3.63
22846>         1.51   114.67    .579E+04       27.9         2.34       3.46
22847>         1.65   114.81    .664E+04       32.5         2.38       3.41
22848>         1.78   114.94    .763E+04       37.8         2.41       3.36
22849>         1.92   115.08    .878E+04       44.0         2.44       3.33
22850>         2.06   115.22    .101E+05       50.8         2.45       3.31
22851>         2.20   115.35    .117E+05       58.8         2.46       3.30
22852>         2.33   115.49    .134E+05       68.1         2.47       3.29
22853>         2.47   115.63    .157E+05       74.2         2.30       3.53
22854>         2.61   115.77    .188E+05       85.0         2.20       3.69
22855>
22856>                                    <---- hydrograph ---->   <-pipe / channel->
22857>                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
22858>                              (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
22859>    INFLOW : ID= 2 ( 50670)  264.00    14.77     6.00  66.66      1.09      1.99
22860>    OUTFLOW: ID= 1 ( 60670)  264.00    13.42     6.00  66.66      1.03      1.94
22861>
22862>
22863>
22864> ------------------------------------------------------------------------------
22865> --------------------
22866> | CALIB            |
22867> | STANDHYD ( 40700)|   Area    (ha)=  10.86
22868> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
22869> --------------------
22870>                              IMPERVIOUS    PERVIOUS (i)
22871>     Surface Area     (ha)=       6.22         4.63
22872>     Dep. Storage     (mm)=       2.00         8.04
22873>     Average Slope     (%)=       2.30         2.30
22874>     Length            (m)=     269.03        47.00
22875>     Mannings n           =      0.015        0.350
22876>
22877>     Max.Eff.Inten.(mm/hr)=     111.66        73.45
22878>                 over (min)        5.00        15.00
22879>     Storage Coeff.  (min)=       3.76 (ii)   14.08 (ii)
22880>     Unit Hyd. Tpeak (min)=       5.00        15.00
22881>     Unit Hyd. peak  (cms)=       0.25         0.08
22882>                                                          *TOTALS*
22883>     PEAK FLOW       (cms)=       1.83         0.59          2.344 (iii)
22884>     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
22885>     RUNOFF VOLUME    (mm)=      82.74        44.09          65.39
22886>     TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
22887>     RUNOFF COEFFICIENT   =       0.98         0.52           0.77
22888>
22889> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
22890>
22891>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22892>           CN*  =  80.7    Ia = Dep. Storage  (Above)
22893>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22894>           THAN THE STORAGE COEFFICIENT.
22895>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22896>
22897> ------------------------------------------------------------------------------
22898>
22899> --------------------
22900> | ADD HYD  ( 50680)|
22901> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
22902> --------------------         (ha)    (cms)    (hrs)     (mm)
22903>        ID1= 1 ( 40700):    10.86   2.344     6.00    65.39
22904>      + ID2= 2 ( 60670):   264.00  13.416     6.00    66.66
22905>        ==================================================
22906>        ID = 3 ( 50680):   274.86  15.760     6.00    66.61
22907>
22908>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
22909> ------------------------------------------------------------------------------
22910> --------------------
22911> | CALIB            |
22912> | STANDHYD ( 40680)|   Area    (ha)=   1.20
22913> |ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
22914> --------------------
22915>                              IMPERVIOUS    PERVIOUS (i)
22916>     Surface Area     (ha)=       0.50         0.69
22917>     Dep. Storage     (mm)=       2.00         7.98
22918>     Average Slope     (%)=       0.60         0.60
22919>     Length            (m)=      89.27        69.00
22920>     Mannings n           =      0.015        0.350
22921>
22922>     Max.Eff.Inten.(mm/hr)=     111.66        50.80
22923>                 over (min)        5.00        30.00
22924>     Storage Coeff.  (min)=       2.90 (ii)   25.44 (ii)
22925>     Unit Hyd. Tpeak (min)=       5.00        30.00
22926>     Unit Hyd. peak  (cms)=       0.28         0.04
22927>                                                          *TOTALS*
22928>     PEAK FLOW       (cms)=       0.14         0.06          0.173 (iii)
22929>     TIME TO PEAK    (hrs)=       6.00         6.33           6.00
22930>     RUNOFF VOLUME    (mm)=      82.74        43.34          58.66
22931>     TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
22932>     RUNOFF COEFFICIENT   =       0.98         0.51           0.69
22933>
22934> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
22935>
22936>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
22937>           CN*  =  80.0    Ia = Dep. Storage  (Above)
22938>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
22939>           THAN THE STORAGE COEFFICIENT.
22940>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
22941>
22942> ------------------------------------------------------------------------------
22943> --------------------
22944> | CALIB            |
22945> | STANDHYD ( 40690)|   Area    (ha)=  25.49
22946> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
22947> --------------------
22948>                              IMPERVIOUS    PERVIOUS (i)
22949>     Surface Area     (ha)=       7.93        17.56
22950>     Dep. Storage     (mm)=       2.00         8.01
```

```
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     412.26        40.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=     111.66        73.57
                    over (min)       5.00        15.00
      Storage Coeff.  (min)=       4.44 (ii)   13.00 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.23         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.13         2.17          4.006 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      82.74        41.58         52.90
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.49          0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.173     6.00    58.66
      + ID2= 2 ( 40690):    25.49   4.006     6.00    52.90
        ====================================================
        ID = 3 ( 50690):    26.69   4.180     6.00    53.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   274.86  15.760     6.00    66.61
      + ID2= 2 ( 50690):    26.69   4.180     6.00    53.15
        ====================================================
        ID = 3 ( 50700):   301.54  19.939     6.00    65.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         109.54        0.0450
                  4.00         108.85        0.0450
                  8.00         108.76        0.0450
                 12.00         108.31        0.0450
                 16.00         107.44        0.0450
                 20.00         107.22        0.0450
                 24.00         107.06        0.0450
                 28.00         107.10        0.0450
                 32.00         107.04        0.0450
                 36.00         106.98        0.0450
                 40.00         106.83        0.0350      Main Channel
                 44.00         106.49        0.0350      Main Channel
                 48.00         106.92    0.0350 /0.0450  Main Channel
                 52.00         107.19        0.0450
                 56.00         107.11        0.0450
                 60.00         107.14        0.0450
                 64.00         107.27        0.0450
                 68.00         107.71        0.0450
                 72.00         108.37        0.0450
                 80.00         109.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)    (cu.m.)      (cms)        (m/s)      (min)
        0.12   106.60   .128E+03        0.1         0.43      35.47
        0.23   106.72   .513E+03        0.4         0.69      22.34
        0.35   106.83   .115E+04        1.1         0.90      17.05
        0.52   107.00   .277E+04        3.6         1.21      12.69
        0.69   107.17   .675E+04        8.9         1.21      12.64
        0.86   107.34   .135E+05       19.9         1.35      11.35
        1.02   107.51   .211E+05       36.3         1.58       9.70
        1.19   107.68   .291E+05       57.8         1.82       8.39
        1.36   107.85   .375E+05       84.0         2.06       7.43
        1.53   108.02   .461E+05      114.5         2.28       6.71
        1.70   108.19   .550E+05      149.1         2.49       6.15
        1.87   108.35   .642E+05      187.4         2.68       5.71
        2.04   108.52   .737E+05      228.8         2.85       5.37
        2.21   108.69   .837E+05      274.1         3.01       5.09
        2.37   108.86   .942E+05      316.2         3.08       4.97
        2.54   109.03   .105E+06      372.6         3.25       4.72
        2.71   109.20   .117E+06      433.4         3.40       4.50
        2.88   109.37   .129E+06      498.6         3.55       4.31
        3.05   109.54   .141E+06      568.2         3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  301.54    19.94    6.00  65.42      0.86      1.35
   OUTFLOW: ID= 1 ( 60700)  301.54    14.72    6.17  65.41      0.78      1.28


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--------------------
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.57         4.79
      Dep. Storage     (mm)=       2.00         8.94
      Average Slope     (%)=       3.90         3.90
      Length            (m)=     205.82        41.00
      Mannings n           =      0.015        0.360

      Max.Eff.Inten.(mm/hr)=     111.66        74.67
                    over (min)       5.00        15.00
      Storage Coeff.  (min)=       2.73 (ii)   10.93 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.29         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.41         0.64          0.971 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      82.74        41.93         50.39
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.49          0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.971     6.00    50.39
      + ID2= 2 ( 60700):   301.54  14.717     6.17    65.41
        ====================================================
        ID = 3 ( 50710):   307.90  15.383     6.17    65.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.12         3.92
      Dep. Storage     (mm)=       2.00         5.64
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     408.55        40.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=     111.66        77.53
                    over (min)       5.00        10.00
      Storage Coeff.  (min)=       4.46 (ii)    7.66 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.23         0.13
                                                          *TOTALS*
      PEAK FLOW       (cms)=       6.35         0.67          7.018 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
      RUNOFF VOLUME    (mm)=      82.74        44.98         76.57
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.53          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |    (cms)     (ha.m.)
                           0.0000      0.0000   |    0.7080      1.0040
                           0.2890      0.3890   |    0.7750      1.0700
                           0.3270      0.4500   |    0.9210      1.2580
                           0.3600      0.6030   |    1.0000      1.3280
                           0.3900      0.6540   |    1.0820      1.3980
                           0.4190      0.7110   |    1.1670      1.4690
                           0.4450      0.7680   |    1.2550      1.5390
                           0.4700      0.8260   |    1.3460      1.6090
                           0.4960      0.8830   |    1.9470      1.9930
                           0.6450      0.9400   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037     7.018      6.00      76.57
   OUTFLOW: ID= 1 ( 70150)     25.037     0.825      6.58      76.55
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.75
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.1362

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  --------------------------
  | Junction Command(70151) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.76         3.40
      Dep. Storage     (mm)=       2.00         6.50
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     307.19        41.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=     111.66        74.41
                    over (min)       5.00        10.00
      Storage Coeff.  (min)=       3.72 (ii)    7.88 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.25         0.13
                                                          *TOTALS*
      PEAK FLOW       (cms)=       3.26         0.55          3.801 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
      RUNOFF VOLUME    (mm)=      82.74        42.95         72.79
      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
      RUNOFF COEFFICIENT   =       0.98         0.51          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |    (cms)     (ha.m.)
                           0.0000      0.0000   |    0.2230      0.3310
                           0.0580      0.0840   |    0.2500      0.3590
                           0.0780      0.1040   |    0.2790      0.3870
                           0.0930      0.1240   |    0.3090      0.4160
                           0.1060      0.1440   |    0.3750      0.4780
                           0.1180      0.1640   |    0.4110      0.5120
                           0.1280      0.1840   |    0.4470      0.5450
                           0.1590      0.2550   |    0.5250      0.6130
                           0.1770      0.2790   |    0.7390      0.9130
                           0.1990      0.3030   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155     3.801      6.00      72.79
   OUTFLOW: ID= 1 ( 70160)     14.155     0.504      6.50      72.76
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.25
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5954

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  --------------------------
  | Junction Command(70161) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)   (hrs)     (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50730)|
```

```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50710):   307.90  15.383     6.17    65.10
     + ID2= 2 ( 70150):    25.04   0.825     6.58    76.55
       ====================================================
       ID = 3 ( 50730):   332.94  16.166     6.17    65.97

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   332.94  16.166     6.17    65.97
     + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
       ====================================================
       ID = 1 ( 50730):   332.94  16.166     6.17    65.97

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50730):   332.94  16.166     6.17    65.97
     + ID2= 2 ( 70160):    14.15   0.504     6.50    72.76
       ====================================================
       ID = 3 ( 50730):   347.09  16.644     6.17    66.24

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   347.09  16.644     6.17    66.24
     + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
       ====================================================
       ID = 1 ( 50730):   347.09  16.644     6.17    66.24

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         96.28        0.0450
                   9.00         95.39        0.0450
                  12.00         94.87        0.0450
                  15.00         94.17        0.0450
                  18.00         93.95        0.0450
                  21.00         94.01        0.0450
                  24.00         93.92        0.0450
                  27.00         93.98    0.0450 /0.0350  Main Channel
                  30.00         93.33        0.0350      Main Channel
                  32.00         93.73    0.0350 /0.0450  Main Channel
                  34.00         94.58        0.0450
                  35.00         95.06        0.0450
                  40.00         95.32        0.0450
                  45.00         96.12        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.46    .164E+03       0.0         0.36       89.51
        0.26   93.60    .654E+03       0.2         0.57       56.39
        0.40   93.73    .147E+04       0.6         0.75       43.03
        0.55   93.88    .274E+04       1.4         0.99       32.63
        0.70   94.03    .550E+04       2.8         1.00       32.28
        0.85   94.18    .104E+05       5.8         1.08       29.94
        1.00   94.33    .159E+05      10.1         1.24       26.04
        1.15   94.48    .216E+05      15.6         1.41       22.97
        1.29   94.63    .275E+05      22.2         1.57       20.64
        1.44   94.78    .338E+05      29.9         1.72       18.84
        1.59   94.93    .404E+05      38.6         1.86       17.44
        1.74   95.08    .473E+05      48.0         1.97       16.40
        1.89   95.23    .549E+05      58.1         2.05       15.76
        2.04   95.38    .637E+05      70.1         2.14       15.14
        2.19   95.53    .731E+05      83.0         2.21       14.67
        2.34   95.68    .833E+05      97.5         2.27       14.23
        2.49   95.83    .941E+05     113.5         2.34       13.82
        2.64   95.98    .106E+06     131.2         2.41       13.42
        2.79   96.13    .118E+06     150.7         2.48       13.05

                                  <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  347.09    16.64    6.17  66.24      1.17      1.43
   OUTFLOW: ID= 1 ( 60730)  347.09    12.18    6.50  66.24      1.05      1.30


---------------------
| CALIB           |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      56.24         13.19
     Dep. Storage     (mm)=       2.00          5.50
     Average Slope     (%)=       1.70          1.70
     Length            (m)=     680.34         43.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     111.66         77.42
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       7.18 (ii)    11.54 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.17          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=      15.80          1.83        17.408 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      82.74         44.61         75.11
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.53          0.89


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)     69.429    17.408      6.00      75.11
   OUTFLOW: ID= 1 ( 70170)     69.429     2.172      6.58      75.09
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.48
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  3.3862


---------------------
| Junction Command(70171) |
---------------------
                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70170)    0.00      0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00      0.00    0.00     0.00


---------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 60730):   347.09  12.177     6.50    66.24
     + ID2= 2 ( 70170):    69.43   2.172     6.58    75.09
       ====================================================
       ID = 3 ( 50770):   416.52  14.330     6.58    67.72

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50770):   416.52  14.330     6.58    67.72
     + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
       ====================================================
       ID = 1 ( 50770):   416.52  14.330     6.58    67.72

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         92.38        0.0450
                   3.00         90.34        0.0450
                   6.00         89.94        0.0450
                   9.00         89.83        0.0450
                  12.00         89.80        0.0450
                  15.00         89.72        0.0450
                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15        0.0350      Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76        0.0450
                  30.00         89.78        0.0450
                  33.00         89.79        0.0450
                  36.00         89.80        0.0450
                  39.00         89.72        0.0450
                  42.00         90.35        0.0450
                  45.00         91.36        0.0450
                  48.00         92.10        0.0450
                  51.00         92.21        0.0450
                  54.00         92.34        0.0450
                  56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   89.29    .298E+02       0.0         0.31       13.27
        0.29   89.44    .119E+03       0.2         0.50        8.36
        0.44   89.58    .268E+03       0.7         0.65        6.38
        0.61   89.76    .588E+03       1.9         0.79        5.25
        0.78   89.93    .179E+04       5.1         0.71        5.86
        0.96   90.10    .329E+04      11.4         0.87        4.79
        1.13   90.27    .489E+04      20.2         1.03        4.03
        1.30   90.45    .656E+04      31.5         1.19        3.47
        1.47   90.62    .828E+04      45.0         1.35        3.06
        1.65   90.79    .100E+05      60.5         1.50        2.76
        1.82   90.97    .118E+05      77.9         1.64        2.53
        1.99   91.14    .136E+05      97.1         1.77        2.34
        2.17   91.31    .155E+05     118.1         1.90        2.18
        2.34   91.48    .173E+05     140.6         2.02        2.06
        2.51   91.66    .193E+05     164.7         2.13        1.95
        2.68   91.83    .212E+05     190.5         2.23        1.86
        2.86   92.00    .232E+05     218.0         2.33        1.78
        3.03   92.18    .253E+05     242.7         2.39        1.74
        3.20   92.35    .275E+05     262.6         2.37        1.75

                                  <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  416.52    14.33    6.58  67.72      1.01      0.91
   OUTFLOW: ID= 1 ( 60770)  416.52    14.30    6.58  67.72      1.01      0.91


---------------------
| CALIB           |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78         11.79
     Dep. Storage     (mm)=       2.00          8.70
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     404.74         43.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     111.66         67.38
                over (min)        5.00         20.00
     Storage Coeff.  (min)=       5.46 (ii)    16.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.20          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.65          1.22         4.498 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      82.74         40.87         61.80
     TOTAL RAINFALL   (mm)=      84.74         84.74         84.74
     RUNOFF COEFFICIENT   =       0.98          0.48          0.73


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57   4.498     6.00    61.80
     + ID2= 2 ( 60770):   416.52  14.296     6.58    67.72
       ====================================================
       ID = 3 ( 50780):   441.09  15.390     6.50    67.39

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------
| CALIB           |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38          2.81
     Dep. Storage     (mm)=       2.00          5.74
```

```
23563>      Average Slope     (%)=       1.20         1.20
23564>      Length            (m)=     233.56        52.00
23565>      Mannings n          =      0.015        0.270
23566>
23567>      Max.Eff.Inten.(mm/hr)=     111.66        76.28
23568>                   over (min)       5.00        20.00
23569>      Storage Coeff.  (min)=       4.20 (ii)   15.43 (ii)
23570>      Unit Hyd. Tpeak (min)=       5.00        20.00
23571>      Unit Hyd. peak  (cms)=       0.24         0.07
23572>                                                        *TOTALS*
23573>      PEAK FLOW       (cms)=       1.57         0.34         1.809 (iii)
23574>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
23575>      RUNOFF VOLUME    (mm)=      82.74        45.07         68.73
23576>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
23577>      RUNOFF COEFFICIENT   =       0.98         0.53          0.81
23578>
23579> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
23580>
23581>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
23582>            CN*  =  79.4    Ia = Dep. Storage  (Above)
23583>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
23584>            THAN THE STORAGE COEFFICIENT.
23585>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
23586>
23587> --------------------------------------------------------------------------------
23588> --------------------
23589> | CALIB            |
23590> | STANDHYD ( 40800)|   Area    (ha)=   5.15
23591> |ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
23592> --------------------
23593>                              IMPERVIOUS    PERVIOUS (i)
23594>      Surface Area     (ha)=       4.66         0.49
23595>      Dep. Storage     (mm)=       2.00         7.60
23596>      Average Slope     (%)=       1.40         1.40
23597>      Length            (m)=     185.29        48.00
23598>      Mannings n          =      0.015        0.330
23599>
23600>      Max.Eff.Inten.(mm/hr)=     111.66        70.42
23601>                   over (min)       5.00        10.00
23602>      Storage Coeff.  (min)=       3.49 (ii)    7.53 (ii)
23603>      Unit Hyd. Tpeak (min)=       5.00        10.00
23604>      Unit Hyd. peak  (cms)=       0.26         0.13
23605>                                                        *TOTALS*
23606>      PEAK FLOW       (cms)=       1.43         0.08         1.504 (iii)
23607>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
23608>      RUNOFF VOLUME    (mm)=      82.74        41.08         78.65
23609>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
23610>      RUNOFF COEFFICIENT   =       0.98         0.48          0.93
23611>
23612> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
23613>
23614>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
23615>            CN*  =  78.5    Ia = Dep. Storage  (Above)
23616>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
23617>            THAN THE STORAGE COEFFICIENT.
23618>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
23619>
23620> --------------------------------------------------------------------------------
23621>
23622> --------------------
23623> | ADD HYD  ( 50795)|
23624> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
23625> --------------------         (ha)    (cms)    (hrs)     (mm)
23626>        ID1= 1 ( 40790):     8.18   1.809     6.00    68.73
23627>      + ID2= 2 ( 40800):     5.15   1.504     6.00    78.65
23628>        ================================================
23629>        ID = 3 ( 50795):    13.33   3.313     6.00    72.56
23630>
23631>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
23632> --------------------------------------------------------------------------------
23633> --------------------
23634> | RESERVOIR( 70180)|     OVERFLOW IS ON
23635> | IN= 2---> OUT= 1 |
23636> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
23637> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
23638>                            0.0000      0.0000   |    0.7780      0.6570
23639>                            0.0040      0.0150   |    1.1550      0.7720
23640>                            0.0090      0.0810   |    1.5780      0.8930
23641>                            0.0120      0.1550   |    1.9240      0.9870
23642>                            0.0140      0.2370   |    2.4190      1.1190
23643>                            0.0160      0.3260   |    2.9510      1.2560
23644>                            0.0620      0.3720   |    3.5980      1.3270
23645>                            0.2560      0.4700   |    4.5570      1.3990
23646>                            0.5310      0.5740   |    5.7230      1.4730
23647>
23648>                                AREA     QPEAK     TPEAK       R.V.
23649>                                (ha)     (cms)     (hrs)       (mm)
23650>    INFLOW : ID= 2 ( 50795)     13.332     3.313     6.00      72.56
23651>    OUTFLOW: ID= 1 ( 70180)     13.332     0.588     6.50      72.49
23652>    OVERFLOW:ID= 3 (  0003)      0.000     0.000     0.00       0.00
23653>
23654>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
23655>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
23656>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
23657>
23658>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 17.75
23659>                    TIME SHIFT OF PEAK FLOW          (min)= 30.00
23660>                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.5936
23661>
23662> --------------------------------------------------------------------------------
23663>
23664>   --------------------------
23665>   | Junction Command(70181) |
23666>   --------------------------
23667>
23668>                             AREA     QPEAK   TPEAK     R.V.
23669>                             (ha)     (cms)    (hrs)     (mm)
23670>   INFLOW : ID= 3( 70180)    0.00     0.00    0.00      0.00
23671>   OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00      0.00
23672>
23673>   --------------------------------------------------------------------------------
23674> --------------------
23675> | CALIB            |
23676> | STANDHYD ( 40805)|   Area    (ha)=   3.57
23677> |ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
23678> --------------------
23679>                              IMPERVIOUS    PERVIOUS (i)
23680>      Surface Area     (ha)=       1.41         2.16
23681>      Dep. Storage     (mm)=       1.00         1.50
23682>      Average Slope     (%)=       1.00         2.00
23683>      Length            (m)=     154.27        40.00
23684>      Mannings n          =      0.013        0.250
23685>
23686>      Max.Eff.Inten.(mm/hr)=     111.66        94.61
23687>                   over (min)       5.00        15.00
23688>      Storage Coeff.  (min)=       3.17 (ii)   10.39 (ii)
23689>      Unit Hyd. Tpeak (min)=       5.00        15.00
23690>      Unit Hyd. peak  (cms)=       0.27         0.09
23691>                                                        *TOTALS*
23692>      PEAK FLOW       (cms)=       0.38         0.39         0.737 (iii)
23693>      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
23694>      RUNOFF VOLUME    (mm)=      83.74        55.63         65.38
23695>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
23696>      RUNOFF COEFFICIENT   =       0.99         0.66          0.77
23697>
23698> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
23699>
23700>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
23701>            CN*  =  85.0    Ia = Dep. Storage  (Above)
23702>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
23703>            THAN THE STORAGE COEFFICIENT.
23704>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
23705>
23706> --------------------------------------------------------------------------------
23707>
23708> --------------------
23709> | ADD HYD  ( 50790)|
23710> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
23711> --------------------         (ha)    (cms)    (hrs)     (mm)
23712>        ID1= 1 ( 40805):     3.57   0.737     6.00    65.38
23713>      + ID2= 2 ( 70180):    13.33   0.588     6.50    72.49
23714>        ================================================
23715>        ID = 3 ( 50790):    16.90   1.042     6.00    70.99
23716>
23717>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
23718> --------------------------------------------------------------------------------
23719>
23720> --------------------
23721> | ADD HYD  ( 50790)|
23722> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
23723> --------------------         (ha)    (cms)    (hrs)     (mm)
23724> *** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
23725> *** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
23726>        ID1= 3 ( 50790):    16.90   1.042     6.00    70.99
23727>      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
23728>        ================================================
23729>        ID = 1 ( 50790):    16.90   1.042     6.00    70.99
23730>
23731>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
23732> --------------------------------------------------------------------------------
23733>
23734> --------------------
23735> | ADD HYD  ( 50800)|
23736> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
23737> --------------------         (ha)    (cms)    (hrs)     (mm)
23738>        ID1= 1 ( 50780):   441.09  15.390     6.50    67.39
23739>      + ID2= 2 ( 50790):    16.90   1.042     6.00    70.99
23740>        ================================================
23741>        ID = 3 ( 50800):   457.99  16.153     6.50    67.52
23742>
23743>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
23744> --------------------------------------------------------------------------------
23745> --------------------
23746> | ROUTE CHN( 60800)|
23747> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
23748> --------------------
23749>                 <------ DATA FOR SECTION (   1.1) ------>
23750>                Distance      Elevation       Manning
23751>                    0.00         88.54        0.0450
23752>                    3.00         88.18        0.0450
23753>                    6.00         87.54        0.0450
23754>                    9.00         87.44        0.0450
23755>                   12.00         87.13        0.0450
23756>                   15.00         87.23        0.0450
23757>                   18.00         87.18        0.0450
23758>                   21.00         86.49    0.0450 /0.0350  Main Channel
23759>                   24.00         85.82        0.0350      Main Channel
23760>                   27.00         86.44    0.0350 /0.0450  Main Channel
23761>                   30.00         87.18        0.0450
23762>                   33.00         87.16        0.0450
23763>                   36.00         87.25        0.0450
23764>                   39.00         87.46        0.0450
23765>                   42.00         87.70        0.0450
23766>                   45.00         87.80        0.0450
23767>                   48.00         88.00        0.0450
23768>                   49.00         88.12        0.0450
23769>                   50.00         88.23        0.0450
23770>                   52.00         88.59        0.0450
23771>
23772>       <---------------------- TRAVEL TIME TABLE ---------------------->
23773>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
23774>          (m)      (m)     (cu.m.)      (cms)        (m/s)       (min)
23775>         0.12    85.95    .779E+02        0.0         0.37       48.75
23776>         0.25    86.07    .312E+03        0.2         0.59       30.71
23777>         0.37    86.19    .701E+03        0.5         0.77       23.44
23778>         0.49    86.32    .125E+04        1.1         0.94       19.35
23779>         0.62    86.44    .195E+04        1.9         1.09       16.67
23780>         0.77    86.59    .299E+04        3.8         1.36       13.29
23781>         0.92    86.74    .424E+04        6.2         1.59       11.42
23782>         1.07    86.89    .570E+04        9.3         1.77       10.25
23783>         1.22    87.04    .736E+04       13.0         1.92        9.44
23784>         1.37    87.19    .938E+04       16.8         1.94        9.33
23785>         1.52    87.34    .134E+05       22.9         1.86        9.74
23786>         1.66    87.49    .182E+05       31.1         1.86        9.72
23787>         1.81    87.64    .237E+05       41.6         1.91        9.51
23788>         1.96    87.79    .298E+05       53.9         1.96        9.22
23789>         2.11    87.94    .365E+05       68.9         2.05        8.84
23790>         2.26    88.09    .437E+05       86.5         2.15        8.43
23791>         2.41    88.24    .513E+05      106.2         2.25        8.04
23792>         2.56    88.39    .592E+05      128.2         2.36        7.69
23793>         2.71    88.54    .674E+05      152.5         2.46        7.36
23794>
23795>                                    <---- hydrograph ---->   <-pipe / channel->
23796>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
23797>                               (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
23798>    INFLOW : ID= 2 ( 50800)  457.99    16.15    6.50  67.52      1.34      1.94
23799>    OUTFLOW: ID= 1 ( 60800)  457.99    15.63    6.67  67.52      1.32      1.93
23800>
23801>
23802>
23803> --------------------------------------------------------------------------------
23804> --------------------
23805> | CALIB            |
23806> | STANDHYD ( 40820)|   Area    (ha)=  14.21
23807> |ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
23808> --------------------
23809>                              IMPERVIOUS    PERVIOUS (i)
23810>      Surface Area     (ha)=       2.98        11.23
23811>      Dep. Storage     (mm)=       2.00         9.57
23812>      Average Slope     (%)=       2.30         2.30
23813>      Length            (m)=     307.74        44.00
23814>      Mannings n          =      0.015        0.390
23815>
23816>      Max.Eff.Inten.(mm/hr)=     111.66        63.46
23817>                   over (min)       5.00        20.00
23818>      Storage Coeff.  (min)=       4.07 (ii)   15.30 (ii)
23819>      Unit Hyd. Tpeak (min)=       5.00        20.00
23820>      Unit Hyd. peak  (cms)=       0.24         0.07
23821>                                                        *TOTALS*
23822>      PEAK FLOW       (cms)=       0.56         1.13         1.339 (iii)
23823>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
23824>      RUNOFF VOLUME    (mm)=      82.74        36.66         42.64
23825>      TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
23826>      RUNOFF COEFFICIENT   =       0.98         0.43          0.50
23827>
23828> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
23829> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
23830>                YOU SHOULD CONSIDER SPLITTING THE AREA.
23831>
23832>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
23833>            CN*  =  73.8    Ia = Dep. Storage  (Above)
23834>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
23835>            THAN THE STORAGE COEFFICIENT.
23836>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
23837>
23838> --------------------------------------------------------------------------------
23839>
23840> --------------------
23841> | ADD HYD  ( 50820)|
23842> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
23843> --------------------         (ha)    (cms)    (hrs)     (mm)
23844>        ID1= 1 ( 40820):    14.21   1.339     6.00    42.64
23845>      + ID2= 2 ( 60800):   457.99  15.635     6.67    67.52
23846>        ================================================
23847>        ID = 3 ( 50820):   472.20  16.128     6.67    66.77
23848>
23849>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
23850> --------------------------------------------------------------------------------
23851>
23852> --------------------
23853> | ADD HYD  ( 50830)|
23854> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
23855> --------------------         (ha)    (cms)    (hrs)     (mm)
23856>        ID1= 1 ( 50500):  1189.81  54.234     6.92    61.51
23857>      + ID2= 2 ( 50820):   472.20  16.128     6.67    66.77
23858>        ================================================
23859>        ID = 3 ( 50830):  1662.01  69.786     6.92    63.01
23860>
23861>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
23862> --------------------------------------------------------------------------------
23863> --------------------
23864> | ROUTE CHN( 60830)|
23865> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
23866> --------------------
23867>                <------ DATA FOR SECTION (   1.1) ------>
23868>                Distance      Elevation       Manning
```

```
                  0.00         82.12        0.0450
                 20.00         81.53        0.0450
                 24.00         81.26        0.0450
                 28.00         81.27        0.0450
                 32.00         80.34    0.0450 /0.0350  Main Channel
                 36.00         79.95        0.0350      Main Channel
                 40.00         80.78        0.0450
                 44.00         81.45        0.0450
                 48.00         81.53        0.0450
                 52.00         81.49        0.0450
                 56.00         81.51        0.0450
                 60.00         81.58        0.0450
                 64.00         81.58        0.0450
                 68.00         81.61        0.0450
                 72.00         81.75        0.0450
                 80.00         82.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10    80.05    .555E+01        0.0          0.24       5.45
        0.19    80.14    .222E+02        0.1          0.38       3.43
        0.29    80.24    .499E+02        0.3          0.50       2.62
        0.39    80.34    .888E+02        0.7          0.60       2.16
        0.50    80.45    .146E+03        1.4          0.77       1.68
        0.62    80.57    .213E+03        2.5          0.91       1.43
        0.73    80.68    .290E+03        3.8          1.02       1.27
        0.85    80.80    .375E+03        5.4          1.13       1.15
        0.96    80.91    .471E+03        7.6          1.26       1.03
        1.08    81.03    .578E+03       10.1          1.37       0.95
        1.19    81.14    .695E+03       13.0          1.46       0.89
        1.31    81.26    .823E+03       16.2          1.53       0.85
        1.43    81.37    .100E+04       19.7          1.53       0.85
        1.54    81.49    .121E+04       24.1          1.56       0.84
        1.66    81.60    .155E+04       29.0          1.46       0.89
        1.77    81.72    .204E+04       36.4          1.39       0.93
        1.89    81.84    .259E+04       45.6          1.38       0.95
        2.00    81.95    .320E+04       56.7          1.38       0.94
        2.12    82.07    .387E+04       69.6          1.40       0.93

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1662.01    69.79    6.92  63.01      2.11      1.40
   OUTFLOW: ID= 1 ( 60830) 1662.01    69.82    6.92  63.01      2.11      1.40


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36        15.15
     Dep. Storage     (mm)=       2.00         5.54
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     550.83        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     111.66       113.54
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       6.85 (ii)   14.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.18         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       6.98         2.82         9.444 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      82.74        49.99         67.49
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.59          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         1.59
     Dep. Storage     (mm)=       2.00         9.61
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     116.69        69.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=     111.66        65.80
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.06 (ii)   14.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.18         0.241 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      82.74        37.93         44.40
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.45          0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  75.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40830):    45.51   9.444     6.00    67.49
     + ID2= 2 ( 40840):     2.04   0.241     6.00    44.40
       ================================================
       ID = 3 ( 50840):    47.56   9.685     6.00    66.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50840):    47.56   9.685     6.00    66.50
     + ID2= 2 ( 60830):  1662.01  69.822     6.92    63.01
       ================================================
       ID = 1 ( 50840):  1709.56  70.866     6.92    63.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.18        0.0450
                 32.00         79.04        0.0450
                 40.00         78.76        0.0450
                 48.00         78.58        0.0450
                 56.00         78.21        0.0450
                 64.00         76.89        0.0350      Main Channel
                 72.00         78.08        0.0450
                 80.00         79.44        0.0450
                 88.00         80.28        0.0450
                 96.00         80.92        0.0450
                104.00         81.29        0.0450
                112.00         81.62        0.0450
                120.00         81.76        0.0450
                128.00         81.81        0.0450
                140.00         82.02        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27    77.16    .320E+03        0.2          0.48      24.00
        0.54    77.43    .128E+04        1.4          0.75      15.12
        0.81    77.70    .288E+04        4.2          0.99      11.54
        1.08    77.97    .512E+04        9.0          1.20       9.53
        1.35    78.24    .799E+04       16.6          1.42       8.02
        1.62    78.51    .119E+05       26.9          1.54       7.40
        1.89    78.78    .176E+05       41.0          1.59       7.15
        2.16    79.05    .252E+05       62.9          1.71       6.68
        2.43    79.32    .341E+05       93.9          1.89       6.05
        2.70    79.59    .438E+05      131.1          2.05       5.56
        2.97    79.86    .544E+05      175.1          2.20       5.18
        3.24    80.13    .660E+05      226.4          2.35       4.86
        3.51    80.40    .787E+05      284.9          2.48       4.60
        3.77    80.67    .924E+05      351.1          2.60       4.39
        4.04    80.94    .107E+06      425.7          2.72       4.20
        4.31    81.21    .124E+06      507.1          2.81       4.06
        4.58    81.48    .141E+06      598.4          2.90       3.94
        4.85    81.75    .161E+06      695.9          2.96       3.86
        5.12    82.02    .185E+06      800.9          2.97       3.85

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 1709.56    70.87     6.92   63.10      2.23      1.75
   OUTFLOW: ID= 1 ( 60840) 1709.56    70.65     6.92   63.10      2.22      1.75


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--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14        18.19
     Dep. Storage     (mm)=       2.00         7.29
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     418.93       142.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=     111.66        50.47
                   over (min)       5.00        30.00
     Storage Coeff.  (min)=       5.11 (ii)   27.69 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.21         0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.94         1.47         2.677 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33          6.00
     RUNOFF VOLUME    (mm)=      82.74        41.88         51.94
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.49          0.61

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40850):    26.33   2.677     6.00    51.94
     + ID2= 2 ( 60840):  1709.56  70.652     6.92    63.10
       ================================================
       ID = 3 ( 50850):  1735.89  71.562     6.92    62.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77        35.37
     Dep. Storage     (mm)=       2.00         8.79
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     611.77       120.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=     111.66        49.58
                   over (min)       5.00        35.00
     Storage Coeff.  (min)=       7.30 (ii)   31.58 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.17         0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       5.41         2.55         6.493 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42          6.00
     RUNOFF VOLUME    (mm)=      82.74        42.43         56.13
     TOTAL RAINFALL   (mm)=      84.74        84.74         84.74
     RUNOFF COEFFICIENT   =       0.98         0.50          0.66

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         85.55        0.0450
                 24.00         85.23        0.0450
                 28.00         85.17        0.0450
                 32.00         85.07        0.0450
                 36.00         84.96        0.0350      Main Channel
                 40.00         84.96        0.0350      Main Channel
                 44.00         85.00    0.0350 /0.0450  Main Channel
                 48.00         85.03        0.0450
                 52.00         85.18        0.0450
                 56.00         85.22        0.0450
                 60.00         85.31        0.0450
                 64.00         85.33        0.0450
                 68.00         85.38        0.0450
                 80.00         85.59        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01    84.96    .992E+01        0.0          0.05     238.32
        0.04    84.99    .159E+03        0.0          0.21      57.53
        0.07    85.03    .408E+03        0.2          0.32      38.32
        0.10    85.06    .751E+03        0.4          0.40      30.54
        0.13    85.09    .114E+04        0.7          0.47      25.77
        0.16    85.12    .158E+04        1.2          0.53      22.66
        0.19    85.15    .206E+04        1.7          0.59      20.45
        0.22    85.18    .259E+04        2.3          0.64      18.91
        0.25    85.21    .321E+04        3.0          0.67      18.12
        0.29    85.24    .393E+04        3.8          0.70      17.32
        0.32    85.27    .473E+04        4.8          0.73      16.56
```

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24175>        0.35    85.30    .562E+04       5.9          0.76      15.89
24176>        0.38    85.34    .663E+04       7.0          0.77      15.69
24177>        0.41    85.37    .777E+04       8.5          0.80      15.20
24178>        0.44    85.40    .902E+04      10.2          0.82      14.69
24179>        0.47    85.43    .104E+05      12.2          0.85      14.19
24180>        0.50    85.46    .118E+05      14.3          0.88      13.73
24181>        0.53    85.49    .133E+05      16.7          0.91      13.31
24182>        0.56    85.52    .150E+05      19.3          0.94      12.91
24183>
24184>                                    <---- hydrograph ---->   <-pipe / channel->
24185>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
24186>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
24187>    INFLOW : ID= 2 ( 40880)   56.14     6.49    6.00  56.13      0.36      0.77
24188>    OUTFLOW: ID= 1 ( 60880)   56.14     4.26    6.08  56.11      0.30      0.71
24189>
24190>
24191>
24192> ------------------------------------------------------------------------------
24193> --------------------
24194> | ROUTEPIPE( 80880)|     PIPE Number     =   1.00
24195> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
24196> | DT=  5.0 min     |     Length       (m)= 888.03
24197> --------------------     Slope      (m/m)=  0.004
24198>                          Manning n       =  0.013
24199>
24200>      <----------------- TRAVEL TIME TABLE ---------------------->
24201>        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
24202>          (m)      (cu.m.)     (cms)        (m/s)        min
24203>         0.10     .213E+03       0.2          0.93       15.91
24204>         0.20     .426E+03       0.7          1.41       10.53
24205>         0.30     .639E+03       1.3          1.76        8.42
24206>         0.40     .853E+03       2.0          2.04        7.25
24207>         0.50     .107E+04       2.7          2.27        6.51
24208>         0.60     .128E+04       3.6          2.47        5.99
24209>         0.70     .149E+04       4.4          2.64        5.60
24210>         0.80     .171E+04       5.4          2.79        5.30
24211>         0.90     .192E+04       6.3          2.92        5.06
24212>         1.00     .213E+04       7.3          3.04        4.87
24213>         1.10     .234E+04       8.3          3.15        4.71
24214>         1.20     .256E+04       9.3          3.24        4.57
24215>         1.30     .277E+04      10.4          3.33        4.45
24216>         1.40     .298E+04      11.4          3.40        4.35
24217>         1.50     .320E+04      12.5          3.48        4.26
24218>         1.60     .341E+04      13.6          3.54        4.18
24219>         1.70     .362E+04      14.7          3.60        4.11
24220>         1.80     .384E+04      15.8          3.66        4.05
24221>         1.90     .405E+04      16.9          3.71        3.99
24222>                                    <---- hydrograph ---->   <-pipe / channel->
24223>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
24224>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
24225>    INFLOW : ID= 2 ( 60880)   56.14     4.26    6.08  56.11      0.68      2.61
24226>    OUTFLOW: ID= 1 ( 80880)   56.14     4.09    6.17  56.11      0.66      2.57
24227>
24228>
24229>
24230> ------------------------------------------------------------------------------
24231> --------------------
24232> | CALIB            |
24233> | STANDHYD ( 40890)|   Area    (ha)=  41.71
24234> |ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
24235> --------------------
24236>                              IMPERVIOUS    PERVIOUS (i)
24237>      Surface Area     (ha)=      18.24        23.47
24238>      Dep. Storage     (mm)=       2.00         8.20
24239>      Average Slope     (%)=       1.10         1.10
24240>      Length            (m)=     527.32        85.00
24241>      Mannings n           =      0.015        0.350
24242>
24243>      Max.Eff.Inten.(mm/hr)=     111.66        63.36
24244>                  over (min)        5.00        30.00
24245>      Storage Coeff.  (min)=       7.02 (ii)   26.51 (ii)
24246>      Unit Hyd. Tpeak (min)=       5.00        30.00
24247>      Unit Hyd. peak  (cms)=       0.17         0.04
24248>                                                          *TOTALS*
24249>      PEAK FLOW       (cms)=       3.91         2.09          4.961 (iii)
24250>      TIME TO PEAK    (hrs)=       6.00         6.33           6.00
24251>      RUNOFF VOLUME    (mm)=      82.74        41.36          54.95
24252>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
24253>      RUNOFF COEFFICIENT   =       0.98         0.49           0.65
24254>
24255>
24256>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
24257>            CN*  =  75.6    Ia = Dep. Storage  (Above)
24258>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
24259>            THAN THE STORAGE COEFFICIENT.
24260>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24261>
24262> ------------------------------------------------------------------------------
24263> --------------------
24264> | CALIB            |
24265> | STANDHYD ( 40900)|   Area    (ha)=  13.56
24266> |ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
24267> --------------------
24268>                              IMPERVIOUS    PERVIOUS (i)
24269>      Surface Area     (ha)=       8.41         5.15
24270>      Dep. Storage     (mm)=       1.00         7.00
24271>      Average Slope     (%)=       1.00         2.00
24272>      Length            (m)=     300.67        43.00
24273>      Mannings n           =      0.015        0.310
24274>
24275>      Max.Eff.Inten.(mm/hr)=     111.66       108.42
24276>                  over (min)        5.00        15.00
24277>      Storage Coeff.  (min)=       5.16 (ii)   13.28 (ii)
24278>      Unit Hyd. Tpeak (min)=       5.00        15.00
24279>      Unit Hyd. peak  (cms)=       0.21         0.08
24280>                                                          *TOTALS*
24281>      PEAK FLOW       (cms)=       1.95         0.95          2.783 (iii)
24282>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
24283>      RUNOFF VOLUME    (mm)=      83.74        48.23          65.27
24284>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
24285>      RUNOFF COEFFICIENT   =       0.99         0.57           0.77
24286>
24287>
24288>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
24289>            CN*  =  78.2    Ia = Dep. Storage  (Above)
24290>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
24291>            THAN THE STORAGE COEFFICIENT.
24292>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24293>
24294> ------------------------------------------------------------------------------
24295> --------------------
24296> | DUHYD    ( 90020)|
24297> | Inlet Cap.= 0.960|
24298> | #of Inlets=     1|
24299> | Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
24300> --------------------      (ha)     (cms)     (hrs)    (mm)
24301>      TOTAL HYD.(ID= 1):  13.56      2.78      6.00   65.27
24302>      ==================================================
24303>      MAJOR SYS.(ID= 2):   2.58      1.82      6.00   65.27
24304>      MINOR SYS.(ID= 3):  10.98      0.96      5.83   65.27
24305>
24306>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24307>
24308> ------------------------------------------------------------------------------
24309>
24310> --------------------
24311> | ADD HYD  ( 50890)|
24312> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24313> --------------------          (ha)    (cms)    (hrs)     (mm)
24314>         ID1= 1 ( 40890):    41.71   4.961     6.00    54.95
24315>       + ID2= 2 ( 50850):  1735.89  71.562     6.92    62.93
24316>         ==================================================
24317>         ID = 3 ( 50890):  1777.60  72.919     6.92    62.75
24318>
24319>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24320> ------------------------------------------------------------------------------
24321>
24322> --------------------
24323> | ADD HYD  ( 50890)|
24324> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
24325> --------------------          (ha)    (cms)    (hrs)     (mm)
24326>         ID1= 3 ( 50890):  1777.60  72.919     6.92    62.75
24327>       + ID2= 2 ( 80880):    56.14   4.094     6.17    56.11
24328>         ==================================================
24329>         ID = 1 ( 50890):  1833.74  75.805     6.83    62.54
24330>
24331>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24332> ------------------------------------------------------------------------------
24333>
24334> --------------------
24335> | ADD HYD  ( 50890)|
24336> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24337> --------------------          (ha)    (cms)    (hrs)     (mm)
24338>         ID1= 1 ( 50890):  1833.74  75.805     6.83    62.54
24339>       + ID2= 2 ( 90020):    10.98   0.960     5.83    65.27
24340>         ==================================================
24341>         ID = 3 ( 50890):  1844.71  76.115     6.83    62.56
24342>
24343>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24344> ------------------------------------------------------------------------------
24345> --------------------
24346> | ROUTE CHN( 60900)|
24347> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
24348> --------------------
24349>                <------ DATA FOR SECTION (   1.1) ------>
24350>                Distance      Elevation       Manning
24351>                    0.00          79.05        0.0450
24352>                    2.00          78.40        0.0450
24353>                    4.00          77.75        0.0450
24354>                    6.00          77.16        0.0450
24355>                    8.00          76.78        0.0450
24356>                   10.00          76.65        0.0450
24357>                   12.00          76.60        0.0450
24358>                   14.00          76.58        0.0450
24359>                   16.00          76.08        0.0450
24360>                   18.00          75.49    0.0450 /0.0350  Main Channel
24361>                   20.00          75.46        0.0350      Main Channel
24362>                   22.00          75.52    0.0350 /0.0450  Main Channel
24363>                   24.00          76.15        0.0450
24364>                   26.00          76.44        0.0450
24365>                   28.00          76.56        0.0450
24366>                   30.00          76.68        0.0450
24367>                   32.00          76.86        0.0450
24368>                   34.00          77.01        0.0450
24369>                   36.00          77.10        0.0450
24370>                   40.00          79.16        0.0450
24371>
24372>      <---------------------- TRAVEL TIME TABLE ---------------------->
24373>        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
24374>          (m)      (m)      (cu.m.)      (cms)         (m/s)      (min)
24375>         0.03    75.49     .127E+02        0.0          0.14      32.03
24376>         0.22    75.68     .231E+03        0.6          0.69       6.29
24377>         0.40    75.87     .510E+03        2.0          1.01       4.28
24378>         0.59    76.05     .849E+03        4.1          1.25       3.45
24379>         0.78    76.24     .125E+04        6.9          1.43       3.02
24380>         0.97    76.43     .175E+04       10.6          1.57       2.75
24381>         1.15    76.62     .240E+04       14.6          1.57       2.75
24382>         1.34    76.80     .343E+04       21.1          1.60       2.71
24383>         1.53    76.99     .465E+04       30.1          1.68       2.58
24384>         1.71    77.18     .605E+04       41.3          1.77       2.44
24385>         1.90    77.36     .754E+04       55.7          1.92       2.26
24386>         2.09    77.55     .908E+04       72.1          2.06       2.10
24387>         2.27    77.74     .107E+05       90.6          2.20       1.96
24388>         2.46    77.92     .123E+05      111.1          2.34       1.84
24389>         2.65    78.11     .140E+05      133.5          2.48       1.74
24390>         2.84    78.30     .157E+05      157.9          2.61       1.66
24391>         3.02    78.49     .175E+05      184.1          2.73       1.58
24392>         3.21    78.67     .193E+05      212.1          2.85       1.52
24393>         3.40    78.86     .211E+05      242.1          2.97       1.46
24394>
24395>                                    <---- hydrograph ---->   <-pipe / channel->
24396>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
24397>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
24398>    INFLOW : ID= 2 ( 50890) 1844.71    76.12    6.83  62.56      2.13      2.09
24399>    OUTFLOW: ID= 1 ( 60900) 1844.71    76.10    6.83  62.56      2.12      2.09
24400>
24401>
24402>      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
24403>
24404> ------------------------------------------------------------------------------
24405> --------------------
24406> | CALIB            |
24407> | STANDHYD ( 40910)|   Area    (ha)=   6.92
24408> |ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
24409> --------------------
24410>                              IMPERVIOUS    PERVIOUS (i)
24411>      Surface Area     (ha)=       4.77         2.15
24412>      Dep. Storage     (mm)=       2.00         7.07
24413>      Average Slope     (%)=       1.70         1.70
24414>      Length            (m)=     214.73        44.00
24415>      Mannings n           =      0.015        0.280
24416>
24417>      Max.Eff.Inten.(mm/hr)=     111.66       127.21
24418>                  over (min)        5.00        15.00
24419>      Storage Coeff.  (min)=       3.59 (ii)   11.22 (ii)
24420>      Unit Hyd. Tpeak (min)=       5.00        15.00
24421>      Unit Hyd. peak  (cms)=       0.26         0.09
24422>                                                          *TOTALS*
24423>      PEAK FLOW       (cms)=       1.12         0.50          1.572 (iii)
24424>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
24425>      RUNOFF VOLUME    (mm)=      82.74        51.40          67.98
24426>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
24427>      RUNOFF COEFFICIENT   =       0.98         0.61           0.80
24428>
24429> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
24430>
24431>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
24432>            CN*  =  78.9    Ia = Dep. Storage  (Above)
24433>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
24434>            THAN THE STORAGE COEFFICIENT.
24435>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24436>
24437> ------------------------------------------------------------------------------
24438>
24439> --------------------
24440> | ADD HYD  ( 50910)|
24441> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24442> --------------------          (ha)    (cms)    (hrs)     (mm)
24443>         ID1= 1 ( 40910):     6.92   1.572     6.00    67.98
24444>       + ID2= 2 ( 60900):  1844.71  76.098     6.83    62.56
24445>         ==================================================
24446>         ID = 3 ( 50910):  1851.63  76.246     6.83    62.58
24447>
24448>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24449> ------------------------------------------------------------------------------
24450> --------------------
24451> | CALIB            |
24452> | STANDHYD (******)|   Area    (ha)=   5.85
24453> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
24454> --------------------
24455>                              IMPERVIOUS    PERVIOUS (i)
24456>      Surface Area     (ha)=       5.79         0.06
24457>      Dep. Storage     (mm)=       2.00         4.48
24458>      Average Slope     (%)=       1.70         1.00
24459>      Length            (m)=      78.30         0.00
24460>      Mannings n           =      0.013        0.030
24461>
24462>      Max.Eff.Inten.(mm/hr)=     111.66        83.83
24463>                  over (min)        5.00         5.00
24464>      Storage Coeff.  (min)=       1.80 (ii)    1.80 (ii)
24465>      Unit Hyd. Tpeak (min)=       5.00         5.00
24466>      Unit Hyd. peak  (cms)=       0.32         0.32
24467>                                                          *TOTALS*
24468>      PEAK FLOW       (cms)=       1.80         0.01          1.810 (iii)
24469>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
24470>      RUNOFF VOLUME    (mm)=      82.74        51.50          82.42
24471>      TOTAL RAINFALL   (mm)=      84.74        84.74          84.74
24472>      RUNOFF COEFFICIENT   =       0.98         0.61           0.97
24473>
24474> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
24475>
24476>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
24477>            CN*  =  85.0    Ia = Dep. Storage  (Above)
24478>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
24479>            THAN THE STORAGE COEFFICIENT.
24480>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
24481>
24482> ------------------------------------------------------------------------------
24483>
24484> --------------------
24485> | ADD HYD  (******)|
24486> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24487> --------------------         (ha)    (cms)    (hrs)     (mm)
24488>         ID1= 1 (******):     5.85   1.810     6.00    82.42
24489>       + ID2= 2 (******):     0.27   0.110     6.50    60.44
24490>         ====================================================
24491>         ID = 3 (******):     6.12   1.810     6.00    81.45
24492>
24493>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24494> ------------------------------------------------------------------------------
24495>
24496> --------------------
24497> | ADD HYD  (******)|
24498> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24499> --------------------         (ha)    (cms)    (hrs)     (mm)
24500>         ID1= 1 (******):     0.27   0.324     6.00    76.40
24501>       + ID2= 2 (******):     4.42   0.959     6.50    60.44
24502>         ====================================================
24503>         ID = 3 (******):     4.70   0.959     6.50    61.37
24504>
24505>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24506> ------------------------------------------------------------------------------
24507>
24508> --------------------
24509> | ADD HYD  (******)|
24510> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
24511> --------------------         (ha)    (cms)    (hrs)     (mm)
24512>         ID1= 3 (******):     4.70   0.959     6.50    61.37
24513>       + ID2= 2 (******):     6.12   1.810     6.00    81.45
24514>         ====================================================
24515>         ID = 1 (******):    10.82   2.135     6.00    72.73
24516>
24517>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24518> ------------------------------------------------------------------------------
24519> --------------------
24520> | ROUTE CHN(******)|
24521> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
24522> --------------------
24523>                <------ DATA FOR SECTION (   1.1) ------>
24524>                Distance      Elevation       Manning
24525>                    0.00        426.51        0.0450
24526>                    0.98        426.14        0.0350      Main Channel
24527>                    2.04        426.14        0.0350      Main Channel
24528>                   20.51        426.51        0.0350      Main Channel
24529>
24530>       <---------------------- TRAVEL TIME TABLE ---------------------->
24531>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
24532>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
24533>         0.00  426.14    .579E+00        0.0         0.03     191.52
24534>         0.02  426.16    .114E+02        0.0         0.14      39.52
24535>         0.04  426.18    .285E+02        0.0         0.19      27.56
24536>         0.06  426.20    .520E+02        0.0         0.24      22.17
24537>         0.08  426.22    .818E+02        0.1         0.28      18.92
24538>         0.10  426.24    .118E+03        0.1         0.32      16.68
24539>         0.12  426.26    .161E+03        0.2         0.36      15.02
24540>         0.14  426.27    .210E+03        0.3         0.39      13.73
24541>         0.16  426.29    .265E+03        0.3         0.42      12.69
24542>         0.18  426.31    .326E+03        0.5         0.45      11.82
24543>         0.20  426.33    .394E+03        0.6         0.48      11.10
24544>         0.22  426.35    .469E+03        0.7         0.51      10.47
24545>         0.24  426.37    .549E+03        0.9         0.54       9.93
24546>         0.26  426.39    .637E+03        1.1         0.56       9.46
24547>         0.28  426.41    .730E+03        1.3         0.59       9.03
24548>         0.30  426.43    .830E+03        1.6         0.62       8.65
24549>         0.32  426.45    .936E+03        1.9         0.64       8.31
24550>         0.34  426.47    .105E+04        2.2         0.67       8.01
24551>         0.35  426.49    .117E+04        2.5         0.69       7.72
24552>
24553>                                  <---- hydrograph ---->   <-pipe / channel->
24554>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
24555>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
24556>    INFLOW : ID= 2 (******)   10.82     2.13    6.00  72.73      0.33      0.66
24557>    OUTFLOW: ID= 1 (******)   10.82     1.81    6.00  72.73      0.31      0.63
24558>
24559>
24560>
24561> ------------------------------------------------------------------------------
24562> --------------------
24563> | ROUTEPIPE(******)|     PIPE Number      =   1.00
24564> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)= 900.00
24565> | DT=  5.0 min     |     Length       (m)= 372.00
24566> --------------------     Slope      (m/m)=  0.004
24567>                          Manning n        =  0.013
24568>
24569>      <----------------- TRAVEL TIME TABLE ---------------------->
24570>        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
24571>          (m)     (cu.m.)      (cms)        (m/s)        min
24572>         0.05     .423E+02       0.1         0.58        10.67
24573>         0.09     .846E+02       0.2         0.90         6.89
24574>         0.14     .127E+03       0.4         1.15         5.39
24575>         0.19     .169E+03       0.6         1.36         4.55
24576>         0.24     .211E+03       0.9         1.55         4.01
24577>         0.28     .254E+03       1.2         1.71         3.63
24578>         0.33     .296E+03       1.5         1.85         3.34
24579>         0.38     .338E+03       1.8         1.99         3.12
24580>         0.43     .381E+03       2.2         2.11         2.94
24581>         0.47     .423E+03       2.5         2.22         2.80
24582>         0.52     .465E+03       2.9         2.32         2.67
24583>         0.57     .507E+03       3.3         2.41         2.57
24584>         0.62     .550E+03       3.7         2.50         2.48
24585>         0.66     .592E+03       4.1         2.58         2.40
24586>         0.71     .634E+03       4.5         2.66         2.33
24587>         0.76     .677E+03       5.0         2.73         2.27
24588>         0.81     .719E+03       5.4         2.80         2.21
24589>         0.85     .761E+03       5.9         2.86         2.17
24590>         0.90     .804E+03       6.3         2.92         2.12
24591>                                  <---- hydrograph ---->   <-pipe / channel->
24592>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
24593>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
24594>    INFLOW : ID= 2 (******)    3.84     0.85    6.00  76.39      0.23      1.52
24595>    OUTFLOW: ID= 1 (******)    3.84     0.86    6.00  76.40      0.23      1.53
24596>
24597>
24598>      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
24599>
24600> ------------------------------------------------------------------------------
24601> --------------------
24602> | CALIB            |
24603> | NASHYD   (******)|   Area     (ha)=   7.90   Curve Number    (CN)= 85.0
24604> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
24605> --------------------   U.H. Tp(hrs)=   0.39
24606>
24607>      Unit Hyd Qpeak  (cms)=   0.774
24608>
24609>      PEAK FLOW       (cms)=   0.784 (i)
24610>      TIME TO PEAK    (hrs)=   6.250
24611>      RUNOFF VOLUME    (mm)=  51.489
24612>      TOTAL RAINFALL   (mm)=  84.737
24613>      RUNOFF COEFFICIENT   =   0.608
24614>
24615>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24616>
24617> ------------------------------------------------------------------------------
24618> --------------------
24619> | CALIB            |
24620> | NASHYD   (******)|   Area     (ha)=   0.33   Curve Number    (CN)= 85.0
24621> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
24622> --------------------   U.H. Tp(hrs)=   0.18
24623>
24624>      Unit Hyd Qpeak  (cms)=   0.070
24625>
24626>      PEAK FLOW       (cms)=   0.053 (i)
24627>      TIME TO PEAK    (hrs)=   6.000
24628>      RUNOFF VOLUME    (mm)=  51.347
24629>      TOTAL RAINFALL   (mm)=  84.737
24630>      RUNOFF COEFFICIENT   =   0.606
24631>
24632>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24633>
24634> ------------------------------------------------------------------------------
24635>
24636> --------------------
24637> | ADD HYD  (******)|
24638> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24639> --------------------         (ha)    (cms)    (hrs)     (mm)
24640>         ID1= 1 (******):     0.33   0.053     6.00    51.35
24641>       + ID2= 2 (******):     7.90   0.784     6.25    51.49
24642>         ====================================================
24643>         ID = 3 (******):     8.23   0.815     6.25    51.48
24644>
24645>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24646> ------------------------------------------------------------------------------
24647> --------------------
24648> | CALIB            |
24649> | NASHYD   (******)|   Area     (ha)=  17.88   Curve Number    (CN)= 85.0
24650> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
24651> --------------------   U.H. Tp(hrs)=   0.48
24652>
24653>      Unit Hyd Qpeak  (cms)=   1.423
24654>
24655>      PEAK FLOW       (cms)=   1.528 (i)
24656>      TIME TO PEAK    (hrs)=   6.333
24657>      RUNOFF VOLUME    (mm)=  51.493
24658>      TOTAL RAINFALL   (mm)=  84.737
24659>      RUNOFF COEFFICIENT   =   0.608
24660>
24661>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24662>
24663> ------------------------------------------------------------------------------
24664> --------------------
24665> | CALIB            |
24666> | NASHYD   (******)|   Area     (ha)=   0.44   Curve Number    (CN)= 85.0
24667> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
24668> --------------------   U.H. Tp(hrs)=   0.19
24669>
24670>      Unit Hyd Qpeak  (cms)=   0.088
24671>
24672>      PEAK FLOW       (cms)=   0.069 (i)
24673>      TIME TO PEAK    (hrs)=   6.083
24674>      RUNOFF VOLUME    (mm)=  51.376
24675>      TOTAL RAINFALL   (mm)=  84.737
24676>      RUNOFF COEFFICIENT   =   0.606
24677>
24678>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24679>
24680> ------------------------------------------------------------------------------
24681>
24682> --------------------
24683> | ADD HYD  (******)|
24684> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24685> --------------------         (ha)    (cms)    (hrs)     (mm)
24686>         ID1= 1 (******):    17.88   1.528     6.33    51.49
24687>       + ID2= 2 (******):     0.44   0.069     6.08    51.38
24688>         ====================================================
24689>         ID = 3 (******):    18.32   1.561     6.33    51.49
24690>
24691>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24692> ------------------------------------------------------------------------------
24693> --------------------
24694> | CALIB            |
24695> | NASHYD   (******)|   Area     (ha)=   0.19   Curve Number    (CN)= 85.0
24696> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
24697> --------------------   U.H. Tp(hrs)=   0.15
24698>
24699>      Unit Hyd Qpeak  (cms)=   0.048
24700>
24701>      PEAK FLOW       (cms)=   0.034 (i)
24702>      TIME TO PEAK    (hrs)=   6.000
24703>      RUNOFF VOLUME    (mm)=  51.197
24704>      TOTAL RAINFALL   (mm)=  84.737
24705>      RUNOFF COEFFICIENT   =   0.604
24706>
24707>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24708>
24709> ------------------------------------------------------------------------------
24710>
24711> --------------------
24712> | ADD HYD  (******)|
24713> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24714> --------------------         (ha)    (cms)    (hrs)     (mm)
24715>         ID1= 1 (******):     0.19   0.034     6.00    51.20
24716>       + ID2= 2 (******):    18.32   1.561     6.33    51.49
24717>         ====================================================
24718>         ID = 3 (******):    18.51   1.572     6.33    51.49
24719>
24720>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24721> ------------------------------------------------------------------------------
24722>
24723> --------------------
24724> | ADD HYD  (******)|
24725> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
24726> --------------------         (ha)    (cms)    (hrs)     (mm)
24727>         ID1= 3 (******):    18.51   1.572     6.33    51.49
24728>       + ID2= 2 (******):     8.23   0.815     6.25    51.48
24729>         ====================================================
24730>         ID = 1 (******):    26.74   2.360     6.25    51.49
24731>
24732>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24733> ------------------------------------------------------------------------------
24734>
24735> --------------------
24736> | ADD HYD  (******)|
24737> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24738> --------------------         (ha)    (cms)    (hrs)     (mm)
24739>         ID1= 1 (******):    26.74   2.360     6.25    51.49
24740>       + ID2= 2 (******):     3.84   0.859     6.00    76.40
24741>         ====================================================
24742>         ID = 3 (******):    30.58   2.651     6.08    54.61
24743>
24744>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24745> ------------------------------------------------------------------------------
24746>
24747> --------------------
24748> | ADD HYD  (******)|
24749> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
24750> --------------------         (ha)    (cms)    (hrs)     (mm)
24751>         ID1= 3 (******):    30.58   2.651     6.08    54.61
24752>       + ID2= 2 (******):    10.82   1.812     6.00    72.73
24753>         ====================================================
24754>         ID = 1 (******):    41.39   4.227     6.00    59.35
24755>
24756>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24757> ------------------------------------------------------------------------------
24758> --------------------
24759> | ROUTE CHN(******)|
24760> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
24761> --------------------
24762>                <------ DATA FOR SECTION (   1.1) ------>
24763>                Distance      Elevation       Manning
24764>                    0.00        418.26        0.0450
24765>                   40.58        417.27        0.0450
24766>                   68.64        416.80        0.0450
24767>                  140.74        415.56        0.0450
24768>                  163.74        415.03    0.0450 /0.0350  Main Channel
24769>                  211.93        413.30        0.0350      Main Channel
24770>                  250.43        411.92        0.0350      Main Channel
24771>                  258.86        411.77        0.0350      Main Channel
24772>                  276.07        411.80        0.0350      Main Channel
24773>                  290.03        411.70        0.0350      Main Channel
24774>                  294.99        411.74        0.0350      Main Channel
24775>                  298.74        411.97        0.0350      Main Channel
24776>                  309.80        412.64        0.0350      Main Channel
24777>                  321.40        413.39        0.0350      Main Channel
24778>                  332.67        415.03    0.0350 /0.0450  Main Channel
24779>                  344.47        416.63        0.0450
24780>                  360.44        418.31        0.0450
24781>                  381.73        419.43        0.0450
24782>                  385.80        419.95        0.0450
24783>                  389.30        420.75        0.0450
24784>
24785>       <---------------------- TRAVEL TIME TABLE ---------------------->
24786>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
```

```
24787>         (m)       (m)      (cu.m.)       (cms)         (m/s)       (min)
24788>        0.33    412.03    .115E+05        14.5          1.18       13.21
24789>        0.67    412.36    .302E+05        61.5          1.91        8.18
24790>        1.00    412.70    .535E+05       139.9          2.46        6.38
24791>        1.33    413.03    .814E+05       252.5          2.91        5.37
24792>        1.66    413.36    .114E+06       402.0          3.32        4.72
24793>        2.00    413.70    .150E+06       597.3          3.74        4.19
24794>        2.33    414.03    .190E+06       834.3          4.12        3.80
24795>        2.66    414.36    .234E+06      1114.3          4.47        3.50
24796>        2.99    414.69    .281E+06      1439.4          4.80        3.26
24797>        3.33    415.03    .332E+06      1811.8          5.12        3.06
24798>        3.69    415.39    .393E+06      2361.5          5.65        2.77
24799>        4.05    415.75    .459E+06      2978.2          6.10        2.57
24800>        4.41    416.10    .533E+06      3668.2          6.46        2.42
24801>        4.76    416.46    .615E+06      4437.5          6.78        2.31
24802>        5.12    416.82    .705E+06      5290.7          7.05        2.22
24803>        5.48    417.18    .804E+06      6232.2          7.29        2.15
24804>        5.84    417.54    .910E+06      7276.0          7.51        2.08
24805>        6.20    417.90    .102E+07      8417.1          7.74        2.02
24806>        6.56    418.26    .114E+07      9654.5          7.95        1.97
24807>
24808>                                    <---- hydrograph ---->   <-pipe / channel->
24809>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
24810>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
24811>    INFLOW : ID= 2 (******)   41.39     4.23    6.00  59.35      0.10      1.18
24812>    OUTFLOW: ID= 1 (******)   41.39     3.44    6.50  59.35      0.08      1.18
24813>
24814>
24815>
24816> --------------------------------------------------------------------------------
24817> --------------------
24818> | CALIB            |
24819> | NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 85.0
24820> |ID= 1 DT= 5.00 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
24821> --------------------   U.H. Tp(hrs)=   0.55
24822>
24823>      Unit Hyd Qpeak  (cms)=   2.154
24824>
24825>      PEAK FLOW       (cms)=   2.406 (i)
24826>      TIME TO PEAK    (hrs)=   6.417
24827>      RUNOFF VOLUME    (mm)=  51.495
24828>      TOTAL RAINFALL   (mm)=  84.737
24829>      RUNOFF COEFFICIENT   =   0.608
24830>
24831>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24832>
24833> --------------------------------------------------------------------------------
24834>
24835> --------------------
24836> | ADD HYD  (******)|
24837> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24838> --------------------          (ha)    (cms)    (hrs)     (mm)
24839>         ID1= 1 (******):    31.02   2.406     6.42    51.49
24840>       + ID2= 2 (******):    41.39   3.436     6.50    59.35
24841>         ==============================================
24842>         ID = 3 (******):    72.41   5.824     6.50    55.98
24843>
24844>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24845> --------------------------------------------------------------------------------
24846> ================================================================================
24847>
24848>        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
24849>        V    V   I    SS     U   U   A A   L
24850>         V  V    I     SS    U   U  AAAAA  L
24851>         V  V    I      SS   U   U  A   A  L
24852>          VV     I    SSSSS  UUUUU  A   A  LLLLL
24853>
24854>         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
24855>        O   O    T      T    H   H   Y Y   MM MM  O   O
24856>        O   O    T      T    H   H    Y    M   M  O   O
24857>         OOO     T      T    H   H    Y    M   M   OOO
24858> Developed and Distributed by Smart City Water Inc
24859> Copyright 2007 - 2022 Smart City Water Inc
24860> All rights reserved.
24861>
24862>
24863>                  *****  D E T A I L E D   O U T P U T *****
24864>
24865>
24866>   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
24867>   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
24868>   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
24869>
24870>
24871> DATE: 02/19/2026                          TIME: 06:03:54
24872>
24873> USER:
24874>
24875>
24876>
24877> COMMENTS: _____________________________________________________________
24878>
24879>
24880> --------------------------------------------------------------------------------
24881>   ************************************************
24882>   ** SIMULATION : 25mmWQ-4hr Chicago (Burlingto **
24883>   ************************************************
24884>
24885>
24886> --------------------
24887> |    READ STORM    |    Filename: C:\Users\DPham\AppD
24888> |                  |              ata\Local\Temp\
24889> |                  |              10fc3edb-a74b-4f10-8c03-341fce89bc9e\fb38eae9
24890> | Ptotal= 22.90 mm |    Comments: Fourteen Mile Creek at Oakville Rain Gau
24891> --------------------
24892>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
24893>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
24894>                  0.00    0.00 |  1.00    2.60 |  2.00    0.60 |  3.00    0.00
24895>                  0.50   41.60 |  1.50    0.00 |  2.50    1.00 |
24896>
24897> --------------------------------------------------------------------------------
24898>
24899> --------------------
24900> | CALIB            |
24901> | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
24902> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
24903> --------------------   U.H. Tp(hrs)=   0.47
24904>
24905>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
24906>
24907>
24908>                               ---- TRANSFORMED HYETOGRAPH ----
24909>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
24910>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
24911>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
24912>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
24913>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
24914>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
24915>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
24916>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
24917>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
24918>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
24919>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
24920>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
24921>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
24922>
24923>      Unit Hyd Qpeak  (cms)=   3.502
24924>
24925>      PEAK FLOW       (cms)=   0.288 (i)
24926>      TIME TO PEAK    (hrs)=   1.417
24927>      RUNOFF VOLUME    (mm)=   2.625
24928>      TOTAL RAINFALL   (mm)=  22.900
24929>      RUNOFF COEFFICIENT   =   0.115
24930>
24931>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24932>
24933> --------------------------------------------------------------------------------
24934> --------------------
24935> | CALIB            |
24936> | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
24937> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
24938> --------------------   U.H. Tp(hrs)=   0.46
24939>
24940>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
24941>
24942>
24943>                               ---- TRANSFORMED HYETOGRAPH ----
24944>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
24945>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
24946>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
24947>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
24948>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
24949>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
24950>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
24951>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
24952>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
24953>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
24954>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
24955>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
24956>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
24957>
24958>      Unit Hyd Qpeak  (cms)=   4.557
24959>
24960>      PEAK FLOW       (cms)=   0.374 (i)
24961>      TIME TO PEAK    (hrs)=   1.333
24962>      RUNOFF VOLUME    (mm)=   2.631
24963>      TOTAL RAINFALL   (mm)=  22.900
24964>      RUNOFF COEFFICIENT   =   0.115
24965>
24966>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
24967>
24968> --------------------------------------------------------------------------------
24969>
24970> --------------------
24971> | ADD HYD  ( 50010)|
24972> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
24973> --------------------          (ha)    (cms)    (hrs)     (mm)
24974>         ID1= 1 ( 40010):    43.09   0.288     1.42     2.62
24975>       + ID2= 2 ( 40030):    54.88   0.374     1.33     2.63
24976>         ================================================
24977>         ID = 3 ( 50010):    97.97   0.660     1.42     2.63
24978>
24979>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
24980> --------------------------------------------------------------------------------
24981> --------------------
24982> | ROUTE CHN( 60010)|
24983> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
24984> --------------------
24985>                  <------ DATA FOR SECTION (   1.1) ------>
24986>                  Distance      Elevation       Manning
24987>                     0.00         160.98        0.0450
24988>                    10.00         160.83        0.0450
24989>                    20.00         160.72        0.0450
24990>                    30.00         160.67        0.0450
24991>                    40.00         160.61        0.0450
24992>                    50.00         160.60        0.0450
24993>                    60.00         160.55        0.0450
24994>                    70.00         160.65        0.0450
24995>                    80.00         159.78        0.0450
24996>                    90.00         157.33    0.0450 /0.0350  Main Channel
24997>                   100.00         157.18        0.0350      Main Channel
24998>                   110.00         158.55        0.0450
24999>                   120.00         160.34        0.0450
25000>                   130.00         160.29        0.0450
25001>                   140.00         160.30        0.0450
25002>                   150.00         160.38        0.0450
25003>                   160.00         160.53        0.0450
25004>                   170.00         160.58        0.0450
25005>                   180.00         160.51        0.0450
25006>                   190.00         160.53        0.0450
25007>
25008>       <---------------------- TRAVEL TIME TABLE ---------------------->
25009>         DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
25010>           (m)      (m)     (cu.m.)      (cms)         (m/s)      (min)
25011>          0.15   157.33    .123E+04        0.4          0.43      57.39
25012>          0.32   157.50    .422E+04        2.5          0.88      27.82
25013>          0.49   157.67    .768E+04        6.3          1.20      20.47
25014>          0.66   157.83    .116E+05       11.5          1.45      16.89
25015>          0.83   158.00    .160E+05       18.2          1.67      14.70
25016>          0.99   158.17    .209E+05       26.5          1.86      13.18
25017>          1.16   158.34    .263E+05       36.3          2.03      12.06
25018>          1.33   158.51    .321E+05       47.9          2.19      11.18
25019>          1.50   158.68    .384E+05       62.7          2.40      10.21
25020>          1.67   158.84    .451E+05       79.9          2.60       9.41
25021>          1.84   159.01    .522E+05       99.0          2.79       8.79
25022>          2.00   159.18    .597E+05      120.2          2.96       8.28
25023>          2.17   159.35    .676E+05      143.3          3.11       7.86
25024>          2.34   159.52    .759E+05      168.5          3.26       7.51
25025>          2.51   159.69    .846E+05      195.8          3.40       7.20
25026>          2.68   159.86    .938E+05      224.4          3.52       6.97
25027>          2.85   160.02    .104E+06      254.6          3.61       6.78
25028>          3.02   160.19    .114E+06      287.5          3.70       6.62
25029>          3.18   160.36    .127E+06      315.8          3.64       6.72
25030>
25031>                                    <---- hydrograph ---->   <-pipe / channel->
25032>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
25033>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
25034>    INFLOW : ID= 2 ( 50010)   97.97     0.66    1.42   2.63      0.17      0.46
25035>    OUTFLOW: ID= 1 ( 60010)   97.97     0.33    1.92   2.62      0.14      0.43
25036>
25037>
25038>
25039> --------------------------------------------------------------------------------
25040> --------------------
25041> | CALIB            |
25042> | STANDHYD ( 40020)|   Area     (ha)=  51.32
25043> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
25044> --------------------
25045>                                  IMPERVIOUS    PERVIOUS (i)
25046>      Surface Area     (ha)=       33.87         17.45
25047>      Dep. Storage     (mm)=        2.00          6.20
25048>      Average Slope     (%)=        1.30          1.30
25049>      Length            (m)=      584.91         50.00
25050>      Mannings n           =       0.015         0.290
25051>
25052>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
25053>
25054>
25055>                               ---- TRANSFORMED HYETOGRAPH ----
25056>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
25057>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
25058>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
25059>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
25060>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
25061>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
25062>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
25063>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
25064>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
25065>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
25066>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
25067>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
25068>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
25069>
25070>      Max.Eff.Inten.(mm/hr)=      41.60         11.96
25071>                  over (min)      10.00         35.00
25072>      Storage Coeff.  (min)=      10.55 (ii)    34.01 (ii)
25073>      Unit Hyd. Tpeak (min)=      10.00         35.00
25074>      Unit Hyd. peak  (cms)=       0.11          0.03
25075>                                                          *TOTALS*
25076>      PEAK FLOW       (cms)=       2.97          0.26        3.056 (iii)
25077>      TIME TO PEAK    (hrs)=       1.00          1.42         1.00
25078>      RUNOFF VOLUME    (mm)=      20.90          4.77        13.80
25079>      TOTAL RAINFALL   (mm)=      22.90         22.90        22.90
25080>      RUNOFF COEFFICIENT   =       0.91          0.21         0.60
25081>
25082>
25083>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
25084>             CN*  =  79.5    Ia = Dep. Storage  (Above)
25085>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
25086>            THAN THE STORAGE COEFFICIENT.
25087>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
25088>
25089> --------------------------------------------------------------------------------
25090>
25091> --------------------
25092> | ADD HYD  ( 50020)|
```

```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40020):    51.32   3.056     1.00    13.80
     + ID2= 2 ( 60010):    97.97   0.330     1.92     2.62
       =====================================================
       ID = 3 ( 50020):   149.29   3.077     1.00     6.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         153.66        0.0450
                  1.00         153.24        0.0450
                  2.00         152.95        0.0450
                  3.00         152.70        0.0450
                  4.00         152.40        0.0450
                  5.00         152.09        0.0450
                  6.00         151.83        0.0450
                  7.00         151.60        0.0450
                  8.00         151.49    0.0450 /0.0350  Main Channel
                  9.00         151.42        0.0350      Main Channel
                 10.00         151.38        0.0350      Main Channel
                 11.00         151.40        0.0350      Main Channel
                 12.00         151.38        0.0350      Main Channel
                 13.00         151.38        0.0350      Main Channel
                 14.00         151.38        0.0350      Main Channel
                 15.00         151.50    0.0350 /0.0450  Main Channel
                 16.00         151.56        0.0450
                 17.00         151.60        0.0450
                 25.00         153.59        0.0450
                 26.00         153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  151.49    .140E+03        0.2         0.36      10.54
        0.23  151.60    .355E+03        0.9         0.58       6.57
        0.34  151.72    .624E+03        2.0         0.74       5.11
        0.45  151.83    .916E+03        3.6         0.89       4.27
        0.57  151.94    .123E+04        5.5         1.02       3.73
        0.68  152.05    .157E+04        7.8         1.13       3.35
        0.79  152.17    .193E+04       10.5         1.24       3.06
        0.90  152.28    .231E+04       13.6         1.34       2.83
        1.02  152.39    .271E+04       17.1         1.43       2.65
        1.13  152.50    .314E+04       20.9         1.52       2.50
        1.24  152.62    .358E+04       25.2         1.60       2.37
        1.35  152.73    .405E+04       29.8         1.67       2.26
        1.47  152.84    .454E+04       34.9         1.75       2.17
        1.58  152.95    .505E+04       40.3         1.81       2.09
        1.69  153.07    .558E+04       46.2         1.88       2.01
        1.80  153.18    .614E+04       52.6         1.95       1.95
        1.92  153.29    .672E+04       59.4         2.01       1.88
        2.03  153.40    .731E+04       66.7         2.07       1.83
        2.14  153.52    .793E+04       74.5         2.14       1.77

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50020)  149.29     3.08     1.00    6.47       0.42      0.83
OUTFLOW: ID= 1 ( 60020)  149.29     2.92     1.08    6.47       0.41      0.82


--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area     (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31         18.38
     Dep. Storage     (mm)=       2.00          6.00
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     686.45         52.00
     Mannings n           =      0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         21.14
                   over (min)       10.00         35.00
     Storage Coeff.  (min)=      11.89 (ii)    31.08 (ii)
     Unit Hyd. Tpeak (min)=      10.00         35.00
     Unit Hyd. peak  (cms)=       0.10          0.03
                                                  *TOTALS*
     PEAK FLOW       (cms)=       4.24          0.42          4.387 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.42           1.00
     RUNOFF VOLUME    (mm)=      20.90          5.84          14.88
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.25           0.65

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40040):    70.68   4.387     1.00    14.88
     + ID2= 2 ( 60020):   149.29   2.921     1.08     6.47
       =====================================================
       ID = 3 ( 50220):   219.97   7.273     1.00     9.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.0560
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
INFLOW : ID= 2 ( 50220)    219.973     7.273      1.00       9.17
OUTFLOW: ID= 1 ( 60020)    219.973     0.365      3.25       9.16
OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.02
                  TIME SHIFT OF PEAK FLOW         (min)=135.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.6509


   --------------------------
   | Junction Command(70011) |
   --------------------------
                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)   (hrs)     (mm)
   INFLOW : ID= 3( 70010)    0.00     0.00    0.00     0.00
   OUTFLOW: ID= 2( 70011)    0.00     0.00    0.00     0.00


--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
       ID1= 1 ( 70010):   219.97   0.365     3.25     9.16
     + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
       =====================================================
       ID = 3 ( 70012):   219.97   0.365     3.25     9.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         148.49        0.0450
                  3.00         148.12        0.0450
                  6.00         148.07        0.0450
                  9.00         147.63        0.0450
                 12.00         147.56        0.0450
                 15.00         147.55        0.0450
                 18.00         147.46        0.0450
                 21.00         147.41        0.0450
                 24.00         147.36        0.0450
                 27.00         147.38        0.0450
                 30.00         147.22        0.0450
                 33.00         147.00        0.0450
                 36.00         146.34        0.0450
                 39.00         145.57        0.0350      Main Channel
                 42.00         145.39        0.0350      Main Channel
                 45.00         145.66        0.0350      Main Channel
                 48.00         146.68        0.0450
                 51.00         147.50        0.0450
                 55.00         148.22        0.0450
                 60.00         148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  145.48    .145E+03        0.0         0.25      83.65
        0.18  145.57    .581E+03        0.2         0.40      52.70
        0.35  145.74    .189E+04        1.1         0.73      29.09
        0.52  145.91    .348E+04        2.7         0.99      21.52
        0.68  146.07    .532E+04        5.0         1.19      17.84
        0.85  146.24    .740E+04        7.9         1.36      15.60
        1.02  146.41    .973E+04       11.5         1.51      14.07
        1.19  146.58    .123E+05       15.9         1.64      12.94
        1.35  146.74    .152E+05       21.2         1.78      11.93
        1.52  146.91    .183E+05       27.8         1.94      10.99
        1.69  147.08    .218E+05       35.0         2.05      10.39
        1.86  147.25    .259E+05       43.0         2.12      10.03
        2.02  147.41    .309E+05       50.6         2.09      10.18
        2.19  147.58    .383E+05       61.5         2.05      10.37
        2.36  147.75    .474E+05       77.1         2.07      10.25
        2.52  147.91    .571E+05       95.6         2.14       9.95
        2.69  148.08    .672E+05      116.0         2.20       9.65
        2.86  148.25    .783E+05      138.1         2.25       9.45
        3.03  148.42    .904E+05      163.4         2.31       9.22

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 70012)  219.97     0.37     3.25    9.16       0.21      0.44
OUTFLOW: ID= 1 ( 60040)  219.97     0.35     4.17    9.16       0.21      0.44


--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area     (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94         19.34
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       3.30          3.30
     Length            (m)=     590.36         68.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         18.07
                   over (min)       10.00         30.00
     Storage Coeff.  (min)=       8.02 (ii)    25.36 (ii)
     Unit Hyd. Tpeak (min)=      10.00         30.00
     Unit Hyd. peak  (cms)=       0.13          0.04
                                                  *TOTALS*
     PEAK FLOW       (cms)=       2.80          0.44          2.983 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.33           1.00
     RUNOFF VOLUME    (mm)=      20.90          5.53          13.06
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.24           0.57

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40050):    52.28   2.983     1.00    13.06
     + ID2= 2 ( 60040):   219.97   0.351     4.17     9.16
       =====================================================
       ID = 3 ( 50040):   272.25   2.990     1.00     9.91

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
---------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        146.35        0.0450
                   16.00        145.17        0.0450
                   18.00        144.62        0.0450
                   20.00        143.50        0.0450
                   26.00        141.63        0.0350      Main Channel
                   30.00        142.17        0.0350      Main Channel
                   34.00        144.28        0.0450
                   38.00        145.27        0.0450
                   50.00        146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25   141.88    .129E+03        0.2         0.54      12.17
        0.50   142.13    .516E+03        1.1         0.86       7.67
        0.74   142.38    .111E+04        3.4         1.21       5.42
        0.99   142.63    .184E+04        7.0         1.50       4.37
        1.24   142.87    .269E+04       11.9         1.75       3.76
        1.49   143.12    .366E+04       18.2         1.96       3.36
        1.74   143.37    .476E+04       25.9         2.15       3.06
        1.98   143.62    .597E+04       35.3         2.33       2.82
        2.23   143.87    .729E+04       46.5         2.52       2.61
        2.48   144.11    .869E+04       59.3         2.69       2.44
        2.73   144.36    .102E+05       74.3         2.88       2.28
        2.97   144.61    .118E+05       92.4         3.09       2.13
        3.22   144.86    .136E+05      111.6         3.24       2.03
        3.47   145.11    .156E+05      133.1         3.37       1.95
        3.72   145.35    .178E+05      152.6         3.38       1.94
        3.97   145.60    .206E+05      175.6         3.37       1.95
        4.21   145.85    .239E+05      204.3         3.37       1.95
        4.46   146.10    .279E+05      238.6         3.38       1.95
        4.71   146.35    .324E+05      279.0         3.40       1.93

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  272.25     2.99    1.00    9.91       0.70      1.12
   OUTFLOW: ID= 1 ( 60050)  272.25     2.80    1.08    9.91       0.68      1.09



---------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        142.52        0.0450
                    2.00        142.41        0.0450
                    4.00        142.26        0.0450
                    6.00        142.08        0.0450
                    8.00        141.85        0.0450
                   10.00        141.61        0.0450
                   12.00        141.38        0.0450
                   14.00        141.11        0.0450
                   16.00        140.93        0.0450
                   18.00        140.83        0.0450
                   20.00        140.73        0.0350      Main Channel
                   22.00        140.55        0.0350      Main Channel
                   24.00        140.49        0.0350      Main Channel
                   26.00        140.65        0.0350      Main Channel
                   28.00        141.04        0.0450
                   30.00        141.72        0.0450
                   32.00        142.19        0.0450
                   40.00        142.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   140.57    .466E+02        0.0         0.23      24.59
        0.15   140.65    .155E+03        0.2         0.38      14.98
        0.23   140.73    .305E+03        0.5         0.51      11.12
        0.34   140.84    .598E+03        1.2         0.68       8.29
        0.45   140.95    .995E+03        2.3         0.80       7.09
        0.56   141.06    .147E+04        3.9         0.91       6.22
        0.68   141.17    .201E+04        6.1         1.04       5.45
        0.79   141.28    .259E+04        8.8         1.16       4.89
        0.90   141.39    .321E+04       12.0         1.27       4.47
        1.01   141.50    .389E+04       15.6         1.36       4.16
        1.12   141.61    .461E+04       19.7         1.45       3.90
        1.23   141.72    .537E+04       24.3         1.54       3.69
        1.34   141.84    .619E+04       29.4         1.61       3.52
        1.45   141.95    .707E+04       35.0         1.68       3.37
        1.56   142.06    .799E+04       41.1         1.75       3.24
        1.67   142.17    .898E+04       47.8         1.81       3.13
        1.79   142.28    .101E+05       54.6         1.85       3.07
        1.90   142.39    .113E+05       62.1         1.87       3.03
        2.01   142.50    .127E+05       70.3         1.88       3.01

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50050)  272.25     2.80    1.08    9.91       0.49      0.83
   OUTFLOW: ID= 1 ( 60060)  272.25     2.54    1.08    9.91       0.47      0.81



---------------------
| CALIB             |
| STANDHYD ( 40060)|   Area     (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94          1.90
     Dep. Storage     (mm)=       2.00          7.70
     Average Slope     (%)=       2.60          2.60
     Length            (m)=     137.56         98.00
     Mannings n           =      0.015         0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          5.32
               over (min)        5.00         50.00
     Storage Coeff.  (min)=      3.59 (ii)    45.47 (ii)
     Unit Hyd. Tpeak (min)=      5.00         50.00
     Unit Hyd. peak  (cms)=      0.26          0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.09          0.02        0.089 (iii)
     TIME TO PEAK    (hrs)=      1.00          1.67        1.00
     RUNOFF VOLUME    (mm)=     20.90          4.06        8.48
     TOTAL RAINFALL   (mm)=     22.90         22.90       22.90
     RUNOFF COEFFICIENT   =      0.91          0.18        0.37

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


---------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40060):     2.84    0.089     1.00     8.48
     + ID2= 2 ( 60060):   272.25    2.537     1.08     9.91
       ================================================
       ID = 3 ( 50070):   275.09    2.567     1.08     9.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


---------------------
| CALIB             |
| STANDHYD ( 40080)|   Area     (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30         13.55
     Dep. Storage     (mm)=       2.00          5.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     515.42         72.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         12.65
               over (min)       10.00         40.00
     Storage Coeff.  (min)=       9.56 (ii)   36.32 (ii)
     Unit Hyd. Tpeak (min)=      10.00         40.00
     Unit Hyd. peak  (cms)=       0.11          0.03
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.28          0.23        2.345 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.50         1.00
     RUNOFF VOLUME    (mm)=      20.90          5.60        13.86
     TOTAL RAINFALL   (mm)=      22.90         22.90        22.90
     RUNOFF COEFFICIENT   =       0.91          0.24         0.61

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


---------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40080):    39.85    2.345     1.00    13.86
     + ID2= 2 ( 50070):   275.09    2.567     1.08     9.89
       ================================================
       ID = 3 ( 50080):   314.94    4.635     1.08    10.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


---------------------
| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        141.24        0.0450
                   40.00        140.58        0.0450
                   50.00        140.57        0.0450
                   60.00        140.36        0.0450
                   70.00        140.19        0.0450
                   80.00        140.15        0.0450
                   90.00        139.70        0.0450
                  100.00        139.54        0.0350      Main Channel
                  110.00        139.97        0.0450
                  120.00        140.53        0.0450
                  130.00        140.63        0.0450
                  140.00        140.72        0.0450
                  150.00        140.87        0.0450
                  190.00        141.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   139.63    .150E+03        0.1         0.18      43.53
        0.17   139.71    .598E+03        0.4         0.30      27.01
        0.26   139.80    .126E+04        1.1         0.42      19.24
        0.34   139.88    .209E+04        2.2         0.52      15.58
        0.43   139.97    .307E+04        3.8         0.60      13.36
        0.51   140.05    .420E+04        6.1         0.70      11.45
        0.60   140.14    .548E+04        9.0         0.79      10.19
        0.68   140.22    .714E+04       11.3         0.76      10.55
        0.77   140.31    .919E+04       15.7         0.82       9.77
        0.85   140.39    .115E+05       21.0         0.88       9.11
        0.94   140.48    .141E+05       27.4         0.94       8.54
        1.02   140.56    .169E+05       34.6         0.99       8.12
        1.11   140.65    .205E+05       41.1         0.97       8.32
        1.19   140.74    .248E+05       51.5         1.00       8.02
        1.28   140.82    .296E+05       64.0         1.04       7.70
        1.36   140.91    .348E+05       78.0         1.08       7.44
        1.45   140.99    .407E+05       93.6         1.11       7.24
        1.53   141.08    .472E+05      111.7         1.14       7.05
        1.62   141.16    .545E+05      132.2         1.17       6.87

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50080)  314.94     4.64    1.08   10.39       0.46      0.63
   OUTFLOW: ID= 1 ( 60080)  314.94     3.68    1.17   10.39       0.42      0.59



---------------------
| CALIB             |
| STANDHYD ( 40090)|   Area     (ha)=   4.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.99          3.46
     Dep. Storage     (mm)=       2.00          9.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     172.19         99.00
     Mannings n           =      0.015         0.370

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
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                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.44
                  over (min)       5.00        70.00
     Storage Coeff.  (min)=       4.21 (ii)   68.55 (ii)
     Unit Hyd. Tpeak (min)=       5.00        70.00
     Unit Hyd. peak  (cms)=       0.24         0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.01          0.072 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.08          1.00
     RUNOFF VOLUME    (mm)=      20.90         2.44          4.98
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.11          0.22

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50090)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40090):     4.45   0.072     1.00     4.98
     + ID2= 2 ( 60080):   314.94   3.681     1.17    10.39
       ==========================================================
       ID = 3 ( 50090):   319.39   3.694     1.17    10.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60100)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        138.71        0.0450
                   4.00        136.97        0.0450
                  28.00        135.94        0.0450
                  32.00        135.79        0.0350      Main Channel
                  36.00        135.23        0.0350      Main Channel
                  40.00        135.71    0.0350 /0.0450  Main Channel
                  54.00        136.96        0.0450
                  80.00        138.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16  135.39    .631E+02       0.1         0.44       12.42
        0.31  135.55    .253E+03       0.5         0.69        7.83
        0.47  135.71    .568E+03       1.6         0.91        5.97
        0.65  135.89    .114E+04       4.2         1.20        4.52
        0.84  136.07    .209E+04       8.7         1.35        4.02
        1.02  136.25    .342E+04      15.4         1.47        3.70
        1.20  136.44    .511E+04      24.8         1.58        3.44
        1.38  136.62    .718E+04      37.2         1.69        3.21
        1.57  136.80    .962E+04      53.1         1.79        3.02
        1.75  136.98    .124E+05      72.7         1.90        2.85
        1.93  137.17    .155E+05      97.8         2.05        2.64
        2.11  137.35    .188E+05     127.1         2.20        2.47
        2.30  137.53    .223E+05     160.4         2.34        2.31
        2.48  137.71    .259E+05     197.8         2.48        2.19
        2.66  137.90    .298E+05     239.5         2.61        2.07
        2.85  138.08    .339E+05     285.4         2.74        1.98
        3.03  138.26    .381E+05     335.6         2.86        1.89
        3.21  138.44    .426E+05     390.3         2.98        1.82
        3.39  138.63    .472E+05     449.4         3.10        1.75

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50090)  319.39     3.69    1.17  10.32      0.62      1.13
   OUTFLOW: ID= 1 ( 60100)  319.39     3.60    1.25  10.32      0.61      1.11

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--------------------
| CALIB            |
| STANDHYD ( 40100)|   Area    (ha)=  26.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.46        14.44
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     423.45       125.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         4.41
                  over (min)      10.00        70.00
     Storage Coeff.  (min)=       8.50 (ii)   66.53 (ii)
     Unit Hyd. Tpeak (min)=      10.00        70.00
     Unit Hyd. peak  (cms)=       0.12         0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.24         0.09          1.249 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.00          1.00
     RUNOFF VOLUME    (mm)=      20.90         4.47         11.44
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.20          0.50

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  83.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40100):    26.90   1.249     1.00    11.44
     + ID2= 2 ( 60100):   319.39   3.597     1.25    10.32
       ==========================================================
       ID = 3 ( 50110):   346.28   4.048     1.17    10.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   3.961

     PEAK FLOW       (cms)=   0.370 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   2.997
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.131

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   4.875

     PEAK FLOW       (cms)=   0.537 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   3.440
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.150

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40120):    44.60   0.370     1.33     3.00
     + ID2= 2 ( 40130):    63.82   0.537     1.42     3.44
       ==========================================================
       ID = 3 ( 50130):   108.42   0.898     1.33     3.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.27        0.0450
                   2.00        155.23        0.0450
                   4.00        155.21        0.0450
                   6.00        155.08        0.0450
                   8.00        154.94        0.0450
                  10.00        154.68        0.0450
                  12.00        154.21        0.0450
                  14.00        153.90        0.0450
                  16.00        153.41        0.0350      Main Channel
                  18.00        153.58        0.0350      Main Channel
                  20.00        153.72    0.0350 /0.0450  Main Channel
                  22.00        153.77        0.0450
                  24.00        153.77        0.0450
                  26.00        153.82        0.0450
                  28.00        153.79        0.0450
                  30.00        153.87        0.0450
                  32.00        153.99        0.0450
                  34.00        154.44        0.0450
                  36.00        154.86        0.0450
                  40.00        155.37        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  153.50    .107E+03       0.0         0.27       87.23
        0.20  153.60    .429E+03       0.1         0.42       55.65
        0.29  153.70    .991E+03       0.4         0.55       42.98
        0.39  153.80    .201E+04       0.9         0.66       35.52
        0.49  153.90    .408E+04       2.1         0.71       33.15
        0.59  153.99    .651E+04       3.7         0.81       29.01
        0.69  154.09    .916E+04       6.1         0.93       25.22
        0.79  154.19    .120E+05       8.9         1.05       22.39
        0.88  154.29    .149E+05      12.3         1.16       20.20
        0.98  154.39    .179E+05      16.2         1.27       18.49
        1.08  154.49    .211E+05      20.5         1.37       17.13
        1.18  154.58    .244E+05      25.4         1.47       16.02
        1.28  154.68    .278E+05      30.7         1.56       15.10
        1.37  154.78    .314E+05      36.4         1.63       14.38
        1.47  154.88    .351E+05      42.5         1.71       13.77
        1.57  154.98    .391E+05      48.9         1.76       13.33
        1.67  155.07    .433E+05      55.6         1.81       12.98
        1.77  155.17    .478E+05      63.0         1.86       12.65
        1.86  155.27    .528E+05      69.8         1.86       12.62

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42     0.90    1.33  3.26      0.38      0.65
   OUTFLOW: ID= 1 ( 60130)  108.42     0.55    1.83  3.25      0.32      0.58

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      46.69        19.07
     Dep. Storage     (mm)=       2.00         6.30
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     662.12        66.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

```
                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         10.73
                 over (min)       10.00         45.00
     Storage Coeff.  (min)=      11.36 (ii)    40.31 (ii)
     Unit Hyd. Tpeak (min)=      10.00         45.00
     Unit Hyd. peak  (cms)=       0.10          0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       4.06          0.26          4.125 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.58          1.00
     RUNOFF VOLUME    (mm)=      20.90          4.83         14.63
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.21          0.64

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40140):    65.76   4.125     1.00    14.63
     + ID2= 2 ( 60130):   108.42   0.546     1.83     3.25
       ==========================================================
       ID = 3 ( 50180):   174.18   4.152     1.00     7.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.55          3.33
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       1.00          1.00
     Length            (m)=     304.26         66.00
     Mannings n           =      0.015         0.310

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          5.11
                 over (min)       10.00         55.00
     Storage Coeff.  (min)=       7.71 (ii)    51.57 (ii)
     Unit Hyd. Tpeak (min)=      10.00         55.00
     Unit Hyd. peak  (cms)=       0.13          0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.12          0.02          1.119 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.75          1.00
     RUNOFF VOLUME    (mm)=      20.90          3.82         16.29
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.17          0.71

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.74          8.05
     Dep. Storage     (mm)=       2.00          8.12
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     303.13        131.00
     Mannings n           =      0.015         0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          2.61
                 over (min)        5.00         80.00
     Storage Coeff.  (min)=       5.91 (ii)    77.53 (ii)
     Unit Hyd. Tpeak (min)=       5.00         80.00
     Unit Hyd. peak  (cms)=       0.19          0.01
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.61          0.03          0.612 (iii)
     TIME TO PEAK    (hrs)=       1.00          2.25          1.00
     RUNOFF VOLUME    (mm)=      20.90          2.74          9.76
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.12          0.43

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
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                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         155.90        0.0450
                    1.00         154.69        0.0450
                    2.00         154.30        0.0450
                    3.00         154.00    0.0450 /0.0350  Main Channel
                    4.00         153.74        0.0350      Main Channel
                    5.00         153.51        0.0350      Main Channel
                    6.00         153.46        0.0350      Main Channel
                    7.00         153.77        0.0350      Main Channel
                    8.00         154.10    0.0350 /0.0450  Main Channel
                    9.00         154.50        0.0450
                   10.00         154.84        0.0450
                   11.00         155.13        0.0450
                   12.00         155.26        0.0450
                   13.00         155.32        0.0450
                   14.00         155.42        0.0450
                   15.00         155.52        0.0450
                   16.00         155.62        0.0450
                   17.00         155.69        0.0450
                   18.00         155.76        0.0450
                   20.00         155.88        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.11   153.57    .445E+02        0.0         0.32      21.18
       0.22   153.68    .135E+03        0.2         0.51      13.45
       0.33   153.79    .262E+03        0.4         0.66      10.46
       0.43   153.89    .423E+03        0.8         0.79       8.73
       0.54   154.00    .616E+03        1.3         0.90       7.61
       0.68   154.14    .900E+03        2.4         1.09       6.30
       0.81   154.27    .123E+04        3.8         1.27       5.40
       0.95   154.41    .160E+04        5.5         1.42       4.83
       1.08   154.54    .201E+04        7.6         1.55       4.43
       1.22   154.68    .246E+04        9.9         1.67       4.12
       1.35   154.81    .294E+04       12.7         1.78       3.86
       1.48   154.94    .345E+04       15.8         1.88       3.65
       1.62   155.08    .400E+04       19.2         1.97       3.48
       1.75   155.21    .458E+04       22.9         2.05       3.34
       1.89   155.35    .524E+04       26.8         2.11       3.26
       2.02   155.48    .599E+04       31.4         2.16       3.18
       2.16   155.62    .682E+04       36.5         2.20       3.12
       2.29   155.75    .774E+04       41.9         2.23       3.08
       2.43   155.89    .878E+04       48.0         2.25       3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     0.61     1.00     9.76       0.38       0.71
   OUTFLOW: ID= 1 ( 60190)   13.78     0.55     1.00     9.75       0.36       0.69


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--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      17.41          5.53
     Dep. Storage     (mm)=       2.00          6.75
     Average Slope     (%)=       3.00          3.00
     Length            (m)=     391.08        150.00
     Mannings n           =      0.015         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          3.27
                 over (min)        5.00         70.00
     Storage Coeff.  (min)=       6.44 (ii)    65.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         70.00
     Unit Hyd. peak  (cms)=       0.18          0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.95          0.03          1.954 (iii)
     TIME TO PEAK    (hrs)=       1.00          2.00          1.00
     RUNOFF VOLUME    (mm)=      20.90          3.41         16.48
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.15          0.72

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40180):    13.89   1.119     1.00     16.29
     + ID2= 2 ( 40200):    22.94   1.954     1.00     16.48
       ==========================================================
       ID = 3 ( 50200):    36.83   3.073     1.00     16.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50200):    36.83   3.073     1.00     16.41
     + ID2= 2 ( 60190):    13.78   0.546     1.00      9.75
       ==========================================================
       ID = 1 ( 50200):    50.61   3.619     1.00     14.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.01          1.06
     Dep. Storage     (mm)=       2.00          6.27
     Average Slope     (%)=       0.90          0.90
     Length            (m)=     201.21        118.00
     Mannings n           =      0.015         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
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                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.33
                  over (min)       5.00        80.00
     Storage Coeff.  (min)=       6.21 (ii)   79.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00        80.00
     Unit Hyd. peak  (cms)=       0.19         0.01
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.57         0.00          0.567 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.17           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.49          17.72
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.15           0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40210):     6.07   0.567     1.00    17.72
      + ID2= 2 ( 50200):    50.61   3.619     1.00    14.60
        ================================================
        ID = 3 ( 50210):    56.68   4.186     1.00    14.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        152.62        0.0450
                  7.00        152.39        0.0450
                  8.00        152.02        0.0450
                  9.00        151.48        0.0450
                 10.00        151.01        0.0450
                 11.00        150.56    0.0450 /0.0350  Main Channel
                 12.00        150.38        0.0350      Main Channel
                 13.00        150.40        0.0350      Main Channel
                 14.00        150.36        0.0350      Main Channel
                 15.00        150.60    0.0350 /0.0450  Main Channel
                 16.00        150.99        0.0450
                 17.00        151.50        0.0450
                 18.00        151.91        0.0450
                 19.00        152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.10  150.46    .580E+02       0.1         0.30      17.06
        0.20  150.56    .160E+03       0.3         0.48      10.57
        0.32  150.68    .314E+03       0.7         0.70       7.18
        0.44  150.80    .489E+03       1.4         0.89       5.71
        0.56  150.92    .686E+03       2.3         1.03       4.89
        0.69  151.04    .904E+03       3.5         1.16       4.35
        0.81  151.16    .114E+04       4.8         1.28       3.95
        0.93  151.29    .140E+04       6.4         1.38       3.66
        1.05  151.41    .167E+04       8.1         1.48       3.42
        1.17  151.53    .196E+04      10.1         1.57       3.22
        1.29  151.65    .227E+04      12.3         1.65       3.06
        1.41  151.77    .260E+04      14.8         1.73       2.93
        1.54  151.89    .295E+04      17.5         1.80       2.81
        1.66  152.01    .331E+04      20.4         1.87       2.70
        1.78  152.13    .369E+04      23.6         1.94       2.61
        1.90  152.26    .409E+04      27.0         2.00       2.52
        2.02  152.38    .451E+04      30.7         2.06       2.45
        2.14  152.50    .500E+04      33.4         2.03       2.49
        2.26  152.62    .563E+04      37.3         2.01       2.51

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50210)   56.68    4.19    1.00  14.93      0.75      1.22
   OUTFLOW: ID= 1 ( 60210)   56.68    4.08    1.00  14.93      0.74      1.21


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--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.91         2.40
     Dep. Storage     (mm)=       2.00         6.17
     Average Slope     (%)=       0.60         0.60
     Length            (m)=     274.66        79.00
     Mannings n            =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.50
                  over (min)      10.00        75.00
     Storage Coeff.  (min)=       8.45 (ii)   72.14 (ii)
     Unit Hyd. Tpeak (min)=      10.00        75.00
     Unit Hyd. peak  (cms)=       0.12         0.02
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.95         0.01          0.955 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.08           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.64          17.06
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.16           0.74

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40220):    11.32   0.955     1.00    17.06
      + ID2= 2 ( 60210):    56.68   4.078     1.00    14.93
        ================================================
        ID = 3 ( 50120):    68.00   5.033     1.00    15.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50120):    68.00   5.033     1.00    15.28
      + ID2= 2 ( 50180):   174.18   4.152     1.00     7.55
        ================================================
        ID = 3 ( 50140):   242.18   9.185     1.00     9.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        152.29        0.0450
                  2.00        152.20        0.0450
                  4.00        152.17        0.0450
                  6.00        152.15        0.0450
                  8.00        151.78        0.0450
                 10.00        151.28        0.0450
                 12.00        150.79        0.0450
                 14.00        150.20    0.0450 /0.0350  Main Channel
                 16.00        149.82        0.0350      Main Channel
                 18.00        149.51        0.0350      Main Channel
                 20.00        149.24        0.0350      Main Channel
                 22.00        149.48        0.0350      Main Channel
                 24.00        150.00    0.0350 /0.0450  Main Channel
                 26.00        150.52        0.0450
                 28.00        151.14        0.0450
                 30.00        151.68        0.0450
                 32.00        152.11        0.0450
                 34.00        152.20        0.0450
                 35.00        152.27        0.0450
                 38.00        152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.15  149.39    .694E+02       0.1         0.32      19.63
        0.31  149.54    .273E+03       0.4         0.53      11.92
        0.46  149.70    .577E+03       1.1         0.72       8.87
        0.61  149.85    .972E+03       2.2         0.87       7.30
        0.76  150.00    .145E+04       3.9         1.01       6.26
        0.93  150.16    .205E+04       6.4         1.18       5.36
        1.09  150.33    .274E+04       9.9         1.37       4.62
        1.25  150.49    .350E+04      14.2         1.54       4.11
        1.42  150.65    .434E+04      19.3         1.69       3.75
        1.58  150.82    .524E+04      25.2         1.83       3.47
        1.74  150.98    .621E+04      31.8         1.95       3.26
        1.91  151.14    .726E+04      39.2         2.06       3.09
        2.07  151.31    .839E+04      47.5         2.16       2.94
        2.23  151.47    .959E+04      56.6         2.25       2.82
        2.40  151.63    .109E+05      66.7         2.34       2.72
        2.56  151.80    .122E+05      77.6         2.41       2.63
        2.72  151.96    .137E+05      89.3         2.48       2.55
        2.89  152.12    .153E+05     102.0         2.55       2.49
        3.05  152.29    .172E+05     111.6         2.47       2.57

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)  242.18    9.19    1.00  9.72      1.06      1.33
   OUTFLOW: ID= 1 ( 60140)  242.18    8.64    1.00  9.72      1.03      1.30


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--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        151.02        0.0450
                  2.00        150.89        0.0450
                  4.00        150.73        0.0450
                  6.00        150.65        0.0450
                  8.00        150.38        0.0450
                 10.00        149.93        0.0450
                 12.00        149.51        0.0450
                 14.00        149.02    0.0450 /0.0350  Main Channel
                 16.00        148.64        0.0350      Main Channel
                 18.00        148.27        0.0350      Main Channel
                 20.00        148.39        0.0350      Main Channel
                 22.00        148.60        0.0350      Main Channel
                 24.00        148.94    0.0350 /0.0450  Main Channel
                 26.00        149.34        0.0450
                 28.00        149.66        0.0450
                 30.00        150.12        0.0450
                 32.00        150.45        0.0450
                 34.00        150.52        0.0450
                 36.00        150.60        0.0450
                 38.00        150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.11  148.38    .283E+02       0.0         0.26      13.34
        0.22  148.49    .107E+03       0.2         0.44       7.98
        0.34  148.60    .226E+03       0.6         0.58       6.07
        0.45  148.72    .380E+03       1.3         0.72       4.90
        0.56  148.83    .563E+03       2.2         0.84       4.20
        0.67  148.94    .775E+03       3.5         0.95       3.72
        0.80  149.07    .105E+04       5.5         1.11       3.17
        0.93  149.20    .136E+04       8.2         1.27       2.77
        1.06  149.32    .170E+04      11.3         1.41       2.50
        1.18  149.45    .207E+04      14.9         1.52       2.31
        1.31  149.58    .248E+04      19.1         1.63       2.17
        1.44  149.71    .292E+04      23.8         1.72       2.05
        1.57  149.83    .340E+04      29.1         1.81       1.95
        1.70  149.96    .391E+04      34.9         1.89       1.87
        1.82  150.09    .445E+04      41.4         1.97       1.79
        1.95  150.22    .502E+04      48.4         2.04       1.73
        2.08  150.35    .563E+04      56.0         2.10       1.67
        2.21  150.47    .628E+04      63.9         2.15       1.64
        2.33  150.60    .702E+04      71.1         2.14       1.64

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60140)  242.18    8.64    1.00  9.72      0.95      1.29
   OUTFLOW: ID= 1 ( 60150)  242.18    8.70    1.08  9.72      0.95      1.29


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| CALIB            |
| STANDHYD ( 40150)|   Area    (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.11         2.26
     Dep. Storage     (mm)=       2.00         6.34
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     189.18        45.00
     Mannings n            =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
```

```
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        10.97
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       4.51 (ii)   23.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.23         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.32         0.03          0.338 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.25           1.00
     RUNOFF VOLUME    (mm)=      20.90         4.09          12.85
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.18           0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40150):     5.37   0.338     1.00    12.85
     + ID2= 2 ( 60150):   242.18   8.702     1.08     9.72
       ====================================================
       ID = 3 ( 50160):   247.54   8.846     1.08     9.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40240)|   Area    (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.79         1.50
     Dep. Storage     (mm)=       2.00         5.70
     Average Slope     (%)=       3.40         3.40
     Length            (m)=     261.85        70.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         7.61
                   over (min)       5.00        30.00
     Storage Coeff.  (min)=       4.88 (ii)   29.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.22         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.00         0.02          1.010 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.33           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.79          18.31
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.17           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40250)|   Area    (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.61         4.75
     Dep. Storage     (mm)=       2.00         7.14
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     298.43        70.00
     Mannings n           =      0.015        0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.89
                   over (min)       5.00        50.00
     Storage Coeff.  (min)=       6.19 (ii)   48.15 (ii)
     Unit Hyd. Tpeak (min)=       5.00        50.00
     Unit Hyd. peak  (cms)=       0.19         0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.96         0.03          0.963 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.75           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.15          14.31
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.14           0.62

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.56        0.0450
                   2.00        155.23        0.0450
                   4.00        154.58        0.0450
                   6.00        153.92        0.0450
                   8.00        153.53        0.0450
                  10.00        152.64        0.0450
                  12.00        152.43    0.0450 /0.0350  Main Channel
                  14.00        152.24        0.0350      Main Channel
                  16.00        152.07        0.0350      Main Channel
                  18.00        152.30    0.0350 /0.0450  Main Channel
                  20.00        152.46        0.0450
                  22.00        155.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   152.18    .895E+02        0.1         0.43      24.33
        0.24   152.30    .356E+03        0.4         0.69      15.20
        0.43   152.49    .118E+04        2.1         1.10       9.55
        0.62   152.68    .234E+04        5.5         1.48       7.09
        0.81   152.88    .361E+04       10.4         1.83       5.76
        1.00   153.07    .494E+04       16.7         2.13       4.94
        1.19   153.26    .634E+04       24.2         2.40       4.38
        1.38   153.45    .781E+04       32.8         2.65       3.97
        1.58   153.64    .936E+04       42.5         2.86       3.67
        1.77   153.83    .110E+05       53.3         3.05       3.45
        1.96   154.02    .128E+05       65.6         3.23       3.26
        2.15   154.21    .147E+05       79.4         3.40       3.09
        2.34   154.40    .167E+05       94.5         3.57       2.95
        2.53   154.60    .188E+05      111.0         3.73       2.82
        2.72   154.79    .209E+05      128.7         3.89       2.71
        2.91   154.98    .231E+05      147.8         4.03       2.61
        3.10   155.17    .255E+05      168.3         4.17       2.52
        3.30   155.36    .279E+05      189.2         4.28       2.46
        3.49   155.55    .305E+05      211.3         4.38       2.40

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     0.96    1.00  14.31      0.30       0.79
   OUTFLOW: ID= 1 ( 60240)   13.36     0.76    1.00  14.31      0.28       0.75


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--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40240):    10.28   1.010     1.00    18.31
     + ID2= 2 ( 50160):   247.54   8.846     1.08     9.79
       ====================================================
       ID = 3 ( 50250):   257.83   9.654     1.00    10.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50250):   257.83   9.654     1.00    10.13
     + ID2= 2 ( 60240):    13.36   0.756     1.00    14.31
       ====================================================
       ID = 1 ( 50250):   271.19  10.410     1.00    10.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        149.47        0.0450
                   3.00        149.39        0.0450
                   6.00        149.18        0.0450
                   9.00        148.85        0.0450
                  12.00        148.60        0.0450
                  15.00        148.16        0.0450
                  18.00        147.81        0.0450
                  21.00        147.50        0.0450
                  24.00        147.26        0.0350      Main Channel
                  27.00        146.88        0.0350      Main Channel
                  30.00        146.72        0.0350      Main Channel
                  33.00        147.27    0.0350 /0.0450  Main Channel
                  36.00        147.60        0.0450
                  39.00        147.71        0.0450
                  42.00        148.10        0.0450
                  45.00        148.90        0.0450
                  48.00        149.05        0.0450
                  51.00        149.12        0.0450
                  54.00        149.43        0.0450
                  57.00        149.67        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14   146.85    .156E+03        0.1         0.30      40.24
        0.27   146.99    .583E+03        0.4         0.51      23.51
        0.41   147.13    .119E+04        1.1         0.68      17.78
        0.54   147.26    .198E+04        2.2         0.82      14.76
        0.69   147.41    .309E+04        4.3         1.02      11.88
        0.84   147.56    .455E+04        7.2         1.15      10.50
        0.98   147.70    .637E+04       10.9         1.24       9.73
        1.13   147.85    .862E+04       15.8         1.32       9.12
        1.28   148.00    .111E+05       21.7         1.41       8.55
        1.42   148.14    .139E+05       28.7         1.50       8.06
        1.57   148.29    .169E+05       37.1         1.59       7.58
        1.72   148.44    .200E+05       46.5         1.68       7.16
        1.87   148.58    .233E+05       57.0         1.77       6.80
        2.01   148.73    .268E+05       68.3         1.85       6.53
        2.16   148.88    .305E+05       80.9         1.92       6.28
        2.31   149.02    .345E+05       93.2         1.95       6.17
        2.45   149.17    .391E+05      106.6         1.97       6.11
        2.60   149.32    .441E+05      123.2         2.02       5.97
        2.75   149.47    .495E+05      139.7         2.04       5.91

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    10.41    1.00  10.33      0.96       1.23
   OUTFLOW: ID= 1 ( 50250)  271.19     8.59    1.17  10.33      0.89       1.18


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--------------------
| CALIB            |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.93        12.52
     Dep. Storage     (mm)=       2.00         6.70
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     435.49        46.00
     Mannings n           =      0.015        0.300

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        11.16
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                over (min)       10.00        35.00
     Storage Coeff.  (min)=       8.83 (ii)   32.26 (ii)
     Unit Hyd. Tpeak (min)=      10.00        35.00
     Unit Hyd. peak  (cms)=       0.12         0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.31         0.18          1.374 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.42           1.00
     RUNOFF VOLUME    (mm)=      20.90         4.44          11.52
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.19           0.50

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40260):    28.45   1.374     1.00    11.52
     + ID2= 2 ( 60250):   271.19   8.590     1.17    10.33
       ==================================================
       ID = 3 ( 50260):   299.64   9.494     1.08    10.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         143.17        0.0450
                  4.00         143.15        0.0450
                  8.00         143.14        0.0450
                 12.00         142.95        0.0450
                 16.00         142.87        0.0450
                 20.00         142.67        0.0450
                 24.00         142.24        0.0450
                 28.00         141.84        0.0450
                 32.00         141.61        0.0450
                 36.00         141.32        0.0450
                 40.00         140.98        0.0450
                 44.00         140.88        0.0450
                 48.00         139.95        0.0350      Main Channel
                 52.00         140.09        0.0350      Main Channel
                 56.00         141.11        0.0450
                 60.00         141.43        0.0450
                 76.00         143.21        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.17  140.12    .479E+03       0.2         0.48       36.89
        0.34  140.29    .147E+04       1.2         0.86       20.63
        0.51  140.46    .272E+04       2.9         1.12       15.78
        0.68  140.63    .421E+04       5.3         1.33       13.28
        0.85  140.80    .596E+04       8.5         1.51       11.69
        1.02  140.97    .812E+04      12.0         1.56       11.29
        1.19  141.14    .111E+05      17.6         1.68       10.52
        1.36  141.31    .147E+05      25.4         1.83        9.67
        1.53  141.48    .191E+05      34.9         1.93        9.14
        1.70  141.65    .242E+05      46.4         2.03        8.71
        1.87  141.81    .301E+05      59.9         2.11        8.38
        2.04  141.98    .367E+05      76.6         2.21        7.99
        2.21  142.15    .439E+05      95.9         2.31        7.63
        2.37  142.32    .517E+05     117.9         2.42        7.30
        2.54  142.49    .600E+05     142.7         2.52        7.01
        2.71  142.66    .689E+05     170.3         2.62        6.74
        2.88  142.83    .785E+05     198.2         2.68        6.60
        3.05  143.00    .892E+05     225.9         2.68        6.58
        3.22  143.17    .101E+06     250.7         2.63        6.73

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50260)  299.64     9.49    1.08  10.45      0.90      1.53
   OUTFLOW: ID= 1 ( 60260)  299.64     7.91    1.25  10.45      0.81      1.47

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--------------------
| CALIB            |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12         6.71
     Dep. Storage     (mm)=       2.00         8.03
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     256.01        73.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         4.56
                over (min)        5.00        60.00
     Storage Coeff.  (min)=       6.75 (ii)   55.96 (ii)
     Unit Hyd. Tpeak (min)=       5.00        60.00
     Unit Hyd. peak  (cms)=       0.18         0.02
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.25         0.04          0.252 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.92           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.64           7.44
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.16           0.32

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40270):     9.83   0.252     1.00     7.44
     + ID2= 2 ( 60260):   299.64   7.907     1.25    10.45
       ==================================================
       ID = 3 ( 50270):   309.47   7.965     1.25    10.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.16        11.14
     Dep. Storage     (mm)=       2.00         7.27
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     456.83        53.00
     Mannings n           =      0.015        0.310

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         9.34
                over (min)       10.00        40.00
     Storage Coeff.  (min)=       9.56 (ii)   38.93 (ii)
     Unit Hyd. Tpeak (min)=      10.00        40.00
     Unit Hyd. peak  (cms)=       0.11         0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.71         0.14          1.747 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.50           1.00
     RUNOFF VOLUME    (mm)=      20.90         4.15          12.80
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.18           0.56

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40280):    31.30   1.747     1.00    12.80
     + ID2= 2 ( 50270):   309.47   7.965     1.25    10.35
       ==================================================
       ID = 3 ( 50280):   340.77   8.654     1.25    10.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         139.35        0.0450
                  3.00         139.19        0.0450
                  6.00         138.46        0.0450
                 27.00         137.71        0.0450
                 30.00         137.44        0.0350      Main Channel
                 33.00         137.26        0.0350      Main Channel
                 36.00         137.51        0.0350      Main Channel
                 39.00         137.64    0.0350 /0.0450  Main Channel
                 42.00         137.71        0.0450
                 57.00         139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  137.35    .361E+02       0.0         0.30       17.09
        0.18  137.44    .145E+03       0.2         0.48       10.76
        0.30  137.55    .369E+03       0.8         0.68        7.57
        0.41  137.67    .717E+03       1.9         0.82        6.28
        0.52  137.78    .124E+04       3.9         0.97        5.27
        0.63  137.89    .192E+04       6.8         1.10        4.67
        0.74  138.00    .273E+04      10.7         1.20        4.25
        0.86  138.11    .369E+04      15.7         1.30        3.93
        0.97  138.23    .480E+04      21.8         1.39        3.67
        1.08  138.34    .605E+04      29.1         1.48        3.46
        1.19  138.45    .745E+04      37.8         1.56        3.28
        1.31  138.56    .895E+04      48.6         1.67        3.07
        1.42  138.68    .105E+05      60.8         1.78        2.88
        1.53  138.79    .121E+05      74.4         1.89        2.71
        1.64  138.90    .138E+05      89.3         1.99        2.57
        1.76  139.01    .155E+05     105.5         2.10        2.44
        1.87  139.13    .172E+05     123.0         2.19        2.33
        1.98  139.24    .190E+05     140.8         2.27        2.25
        2.09  139.35    .209E+05     159.0         2.33        2.20

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77     8.65    1.25  10.58      0.68      1.14
   OUTFLOW: ID= 1 ( 60280)  340.77     8.45    1.33  10.58      0.68      1.14

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--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.71         4.81
     Dep. Storage     (mm)=       2.00         7.99
     Average Slope     (%)=       1.60         1.60
     Length            (m)=     277.19        63.00
     Mannings n           =      0.015        0.340

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         7.11
                over (min)        5.00        45.00
     Storage Coeff.  (min)=       6.33 (ii)   40.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        45.00
     Unit Hyd. peak  (cms)=       0.19         0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.59         0.05          0.601 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.58           1.00
     RUNOFF VOLUME    (mm)=      20.90         3.71          11.43
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.16           0.50

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40300):    11.53   0.601     1.00    11.43
      + ID2= 2 ( 60280):   340.77   8.450     1.33    10.58
        ================================================
        ID = 3 ( 50300):   352.30   8.545     1.33    10.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         137.26        0.0450
                   4.00         136.94        0.0450
                   8.00         136.82        0.0450
                  12.00         136.69        0.0450
                  16.00         136.55        0.0450
                  36.00         135.52        0.0350      Main Channel
                  64.00         136.21        0.0450
                  75.00         136.49        0.0450
                  84.00         137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   135.61    .491E+02        0.1         0.26      12.99
        0.18   135.70    .196E+03        0.4         0.42       8.18
        0.27   135.79    .442E+03        1.2         0.55       6.24
        0.36   135.88    .785E+03        2.5         0.66       5.15
        0.45   135.97    .123E+04        4.6         0.77       4.44
        0.53   136.06    .177E+04        7.5         0.87       3.93
        0.62   136.15    .240E+04       11.3         0.96       3.55
        0.71   136.24    .314E+04       16.4         1.07       3.19
        0.80   136.32    .397E+04       23.3         1.20       2.84
        0.89   136.41    .490E+04       31.4         1.32       2.60
        0.98   136.50    .592E+04       40.8         1.42       2.41
        1.07   136.59    .701E+04       51.5         1.51       2.27
        1.16   136.68    .816E+04       63.4         1.59       2.14
        1.25   136.77    .938E+04       76.6         1.67       2.04
        1.34   136.86    .107E+05       91.2         1.75       1.95
        1.42   136.95    .120E+05      107.3         1.83       1.87
        1.51   137.04    .135E+05      125.8         1.91       1.78
        1.60   137.13    .149E+05      145.6         2.00       1.71
        1.69   137.22    .164E+05      166.8         2.08       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30     8.55    1.33  10.60      0.56      0.89
   OUTFLOW: ID= 1 ( 60300)  352.30     8.44    1.33  10.60      0.56      0.89



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--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area     (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77         6.39
     Dep. Storage     (mm)=       2.00         8.38
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     247.21        43.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         6.53
                   over (min)        5.00        30.00
     Storage Coeff.  (min)=       4.80 (ii)   28.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.22         0.04
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.25         0.06          0.268 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.42          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.15          7.32
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.14          0.32

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17   0.268     1.00     7.32
      + ID2= 2 ( 60300):   352.30   8.441     1.33    10.60
        ================================================
        ID = 3 ( 50340):   361.46   8.521     1.33    10.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   346.28   4.048     1.17    10.41
      + ID2= 2 ( 50340):   361.46   8.521     1.33    10.52
        ================================================
        ID = 3 ( 50350):   707.75  12.204     1.33    10.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         134.05        0.0450
                  24.00         133.67        0.0450
                  30.00         131.85        0.0450
                  36.00         131.42        0.0450
                  42.00         130.48        0.0450
                  48.00         130.42        0.0350      Main Channel
                  54.00         130.42        0.0350      Main Channel
                  60.00         130.62        0.0450
                  66.00         130.77        0.0450
                  72.00         131.03        0.0450
                  78.00         131.43        0.0450
                  84.00         131.38        0.0450
                  90.00         131.33        0.0450
                  96.00         131.98        0.0450
                 102.00         133.31        0.0450
                 120.00         133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   130.42    .133E+02        0.0          0.03     768.63
        0.19   130.61    .383E+04        1.6          0.61      40.07
        0.37   130.79    .994E+04        6.6          0.97      25.18
        0.56   130.98    .179E+05       15.1          1.23      19.81
        0.75   131.16    .272E+05       27.2          1.46      16.72
        0.93   131.35    .377E+05       42.2          1.64      14.88
        1.12   131.54    .521E+05       60.9          1.71      14.26
        1.30   131.72    .683E+05       87.2          1.86      13.07
        1.49   131.91    .857E+05      119.1          2.03      11.99
        1.68   132.09    .104E+06      157.8          2.22      10.96
        1.86   132.28    .122E+06      201.6          2.41      10.11
        2.05   132.47    .141E+06      250.1          2.59       9.41
        2.23   132.65    .160E+06      303.1          2.76       8.82
        2.42   132.84    .180E+06      360.6          2.93       8.32
        2.61   133.02    .200E+06      422.5          3.08       7.90
        2.79   133.21    .221E+06      488.7          3.24       7.53
        2.98   133.40    .242E+06      552.2          3.34       7.29
        3.16   133.58    .264E+06      613.6          3.40       7.17
        3.35   133.77    .288E+06      658.8          3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    12.20    1.33  10.46      0.50      1.13
   OUTFLOW: ID= 1 ( 60350)  707.75    12.73    1.50  10.46      0.51      1.14



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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.049 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.362
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.80   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.021 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.357
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        70.81
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.76 (ii)    3.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.25
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.09          0.154 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.00          1.00
     RUNOFF VOLUME    (mm)=      20.90        11.60         14.94
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.51          0.65
```

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.15     0.00     0.00     0.00     0.00     0.15
        0.15     1.00     0.00     0.00     0.00     1.15
        0.15   100.00     0.00     0.00     0.00   100.15

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   1.62      0.15      1.00   14.94
     ==========================================================
     ID= 2  (   2)    :   1.62      0.15      1.00   14.94
     ID= 3  (   2)    :   0.00      0.00      1.00   14.94
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80   0.021     1.08     5.36
      + ID2= 2 (******):     1.62   0.154     1.00    14.94
        ==========================================================
        ID = 3 (******):     2.42   0.172     1.00    11.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22   0.049     1.17     5.36
      + ID2= 2 (******):     2.42   0.172     1.00    11.77
        ==========================================================
        ID = 3 (******):     4.64   0.211     1.00     8.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   4.64      0.21      1.00    8.71
     ==========================================================
     ID= 2  (   2)    :   2.32      0.11      1.00    8.71
     ID= 3  (   2)    :   2.32      0.11      1.00    8.71
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.03   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.025 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.359
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.025     1.08     5.36
      + ID2= 2 (******):     2.32   0.106     1.00     8.71
        ==========================================================
        ID = 3 (******):     3.35   0.127     1.00     7.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.018 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.349
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.018     1.08     5.35
      + ID2= 2 (******):     2.32   0.106     1.00     8.71
        ==========================================================
        ID = 3 (******):     2.93   0.123     1.00     8.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.015 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.354
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.009 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.324
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.232

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.009     1.00     5.32
      + ID2= 2 (******):     0.54   0.015     1.08     5.35
        ==========================================================
        ID = 3 (******):     0.80   0.023     1.00     5.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.80   0.023     1.00     5.34
      + ID2= 2 (******):     2.93   0.123     1.00     8.01
        ==========================================================
        ID = 1 (******):     3.73   0.146     1.00     7.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.049 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.361
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
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27847> --------------------   U.H. Tp(hrs)=   0.22
27848>
27849>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
27850>
27851>
27852>                                ---- TRANSFORMED HYETOGRAPH ----
27853>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
27854>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
27855>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
27856>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
27857>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
27858>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
27859>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
27860>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
27861>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
27862>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
27863>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
27864>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
27865>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
27866>
27867>      Unit Hyd Qpeak  (cms)=   0.175
27868>
27869>      PEAK FLOW       (cms)=   0.026 (i)
27870>      TIME TO PEAK    (hrs)=   1.083
27871>      RUNOFF VOLUME    (mm)=   5.358
27872>      TOTAL RAINFALL   (mm)=  22.900
27873>      RUNOFF COEFFICIENT   =   0.234
27874>
27875>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
27876>
27877> ---------------------------------------------------------------------------
27878> --------------------
27879> | CALIB              |
27880> | NASHYD   (******)|   Area     (ha)=   0.29   Curve Number    (CN)= 85.0
27881> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
27882> --------------------   U.H. Tp(hrs)=   0.17
27883>
27884>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
27885>
27886>
27887>                                ---- TRANSFORMED HYETOGRAPH ----
27888>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
27889>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
27890>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
27891>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
27892>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
27893>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
27894>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
27895>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
27896>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
27897>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
27898>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
27899>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
27900>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
27901>
27902>      Unit Hyd Qpeak  (cms)=   0.065
27903>
27904>      PEAK FLOW       (cms)=   0.009 (i)
27905>      TIME TO PEAK    (hrs)=   1.000
27906>      RUNOFF VOLUME    (mm)=   5.344
27907>      TOTAL RAINFALL   (mm)=  22.900
27908>      RUNOFF COEFFICIENT   =   0.233
27909>
27910>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
27911>
27912> ---------------------------------------------------------------------------
27913> --------------------
27914> | CALIB              |
27915> | STANDHYD (******)|   Area     (ha)=   3.63
27916> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
27917> --------------------
27918>                              IMPERVIOUS    PERVIOUS (i)
27919>      Surface Area     (ha)=       2.98         0.65
27920>      Dep. Storage     (mm)=       2.00         4.13
27921>      Average Slope     (%)=       1.00         2.00
27922>      Length            (m)=      30.00        30.00
27923>      Mannings n            =      0.013        0.025
27924>
27925>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
27926>
27927>
27928>                                ---- TRANSFORMED HYETOGRAPH ----
27929>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
27930>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
27931>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
27932>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
27933>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
27934>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
27935>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
27936>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
27937>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
27938>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
27939>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
27940>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
27941>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
27942>
27943>      Max.Eff.Inten.(mm/hr)=      41.60       109.60
27944>                 over (min)          5.00         5.00
27945>      Storage Coeff.  (min)=       1.76 (ii)    3.29 (ii)
27946>      Unit Hyd. Tpeak (min)=       5.00         5.00
27947>      Unit Hyd. peak  (cms)=       0.32         0.27
27948>                                                    *TOTALS*
27949>      PEAK FLOW       (cms)=       0.17         0.20          0.373 (iii)
27950>      TIME TO PEAK    (hrs)=       1.00         1.00           1.00
27951>      RUNOFF VOLUME    (mm)=      20.90        13.67          16.63
27952>      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
27953>      RUNOFF COEFFICIENT   =       0.91         0.60           0.73
27954>
27955> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
27956>
27957>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
27958>             CN*  =  86.0    Ia = Dep. Storage  (Above)
27959>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
27960>            THAN THE STORAGE COEFFICIENT.
27961>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
27962>
27963> ---------------------------------------------------------------------------
27964> --------------------
27965> | DIVERTHYD(******)|
27966> | IN= 1   # OUT= 5 |
27967> --------------------
27968>      Outflow / Inflow  Relationships
27969>
27970>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
27971>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
27972>        0.00     0.00     0.00     0.00     0.00     0.00
27973>        0.37     0.00     0.00     0.00     0.00     0.37
27974>        0.37     1.00     0.00     0.00     0.00     1.37
27975>        0.37   100.00     0.00     0.00     0.00   100.37
27976>
27977>                             AREA     QPEAK     TPEAK    R.V.
27978>                             (ha)     (cms)     (hrs)    (mm)
27979>      TOTAL HYD.(ID= 1):    3.63      0.37      1.00   16.63
27980>      ================================================
27981>      ID= 2  (   2)    :    3.63      0.37      1.00   16.63
27982>      ID= 3  (   2)    :    0.00      0.00      1.00   16.63
27983>      ID= 4  (   2)    :    0.00      0.00      0.00    0.00
27984>      ID= 5  (   2)    :    0.00      0.00      0.00    0.00
27985>      ID= 6  (   2)    :    0.00      0.00      0.00    0.00
27986> ---------------------------------------------------------------------------
27987>
27988> --------------------
27989> | ADD HYD  (******)|
27990> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
27991> --------------------          (ha)    (cms)    (hrs)     (mm)
27992>         ID1= 1 (******):     0.29   0.009     1.00     5.34
27993>       + ID2= 2 (******):     3.63   0.373     1.00    16.63
27994>         ==================================================
27995>         ID = 3 (******):     3.92   0.382     1.00    15.80
27996>
27997>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
27998> ---------------------------------------------------------------------------
27999>

28000> --------------------
28001> | ADD HYD  (******)|
28002> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
28003> --------------------          (ha)    (cms)    (hrs)     (mm)
28004>         ID1= 1 (******):     1.01   0.026     1.08     5.36
28005>       + ID2= 2 (******):     3.92   0.382     1.00    15.80
28006>         ==================================================
28007>         ID = 3 (******):     4.93   0.405     1.00    13.66
28008>
28009>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
28010> ---------------------------------------------------------------------------
28011>
28012> --------------------
28013> | ADD HYD  (******)|
28014> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
28015> --------------------          (ha)    (cms)    (hrs)     (mm)
28016>         ID1= 1 (******):     2.16   0.049     1.08     5.36
28017>       + ID2= 2 (******):     4.93   0.405     1.00    13.66
28018>         ==================================================
28019>         ID = 3 (******):     7.09   0.445     1.00    11.13
28020>
28021>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
28022> ---------------------------------------------------------------------------
28023> --------------------
28024> | CALIB              |
28025> | NASHYD   (******)|   Area     (ha)=   1.92   Curve Number    (CN)= 85.0
28026> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
28027> --------------------   U.H. Tp(hrs)=   0.23
28028>
28029>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
28030>
28031>
28032>                                ---- TRANSFORMED HYETOGRAPH ----
28033>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
28034>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
28035>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
28036>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
28037>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
28038>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
28039>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
28040>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
28041>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
28042>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
28043>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
28044>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
28045>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
28046>
28047>      Unit Hyd Qpeak  (cms)=   0.319
28048>
28049>      PEAK FLOW       (cms)=   0.048 (i)
28050>      TIME TO PEAK    (hrs)=   1.083
28051>      RUNOFF VOLUME    (mm)=   5.359
28052>      TOTAL RAINFALL   (mm)=  22.900
28053>      RUNOFF COEFFICIENT   =   0.234
28054>
28055>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
28056>
28057> ---------------------------------------------------------------------------
28058> --------------------
28059> | CALIB              |
28060> | NASHYD   (******)|   Area     (ha)=   0.71   Curve Number    (CN)= 85.0
28061> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
28062> --------------------   U.H. Tp(hrs)=   0.20
28063>
28064>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
28065>
28066>
28067>                                ---- TRANSFORMED HYETOGRAPH ----
28068>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
28069>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
28070>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
28071>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
28072>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
28073>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
28074>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
28075>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
28076>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
28077>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
28078>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
28079>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
28080>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
28081>
28082>      Unit Hyd Qpeak  (cms)=   0.136
28083>
28084>      PEAK FLOW       (cms)=   0.020 (i)
28085>      TIME TO PEAK    (hrs)=   1.083
28086>      RUNOFF VOLUME    (mm)=   5.354
28087>      TOTAL RAINFALL   (mm)=  22.900
28088>      RUNOFF COEFFICIENT   =   0.234
28089>
28090>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
28091>
28092> ---------------------------------------------------------------------------
28093> --------------------
28094> | CALIB              |
28095> | STANDHYD (******)|   Area     (ha)=   8.29
28096> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
28097> --------------------
28098>                              IMPERVIOUS    PERVIOUS (i)
28099>      Surface Area     (ha)=       8.21         0.08
28100>      Dep. Storage     (mm)=       2.00         4.13
28101>      Average Slope     (%)=       1.00         2.00
28102>      Length            (m)=      30.00        30.00
28103>      Mannings n            =      0.013        0.025
28104>
28105>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
28106>
28107>
28108>                                ---- TRANSFORMED HYETOGRAPH ----
28109>                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
28110>                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
28111>                  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
28112>                  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
28113>                  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
28114>                  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
28115>                  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
28116>                  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
28117>                  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
28118>                  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
28119>                  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
28120>                  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
28121>                  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
28122>
28123>      Max.Eff.Inten.(mm/hr)=      41.60        17.60
28124>                 over (min)          5.00         5.00
28125>      Storage Coeff.  (min)=       1.76 (ii)    2.10 (ii)
28126>      Unit Hyd. Tpeak (min)=       5.00         5.00
28127>      Unit Hyd. peak  (cms)=       0.32         0.31
28128>                                                    *TOTALS*
28129>      PEAK FLOW       (cms)=       0.95         0.00          0.953 (iii)
28130>      TIME TO PEAK    (hrs)=       1.00         1.00           1.00
28131>      RUNOFF VOLUME    (mm)=      20.90        5.86           20.75
28132>      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
28133>      RUNOFF COEFFICIENT   =       0.91         0.26           0.91
28134>
28135> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
28136>
28137>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
28138>             CN*  =  86.0    Ia = Dep. Storage  (Above)
28139>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
28140>            THAN THE STORAGE COEFFICIENT.
28141>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
28142>
28143> ---------------------------------------------------------------------------
28144> --------------------
28145> | CALIB              |
28146> | STANDHYD (******)|   Area     (ha)=   1.19
28147> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
28148> --------------------
28149>                              IMPERVIOUS    PERVIOUS (i)
28150>      Surface Area     (ha)=       1.18         0.01
28151>      Dep. Storage     (mm)=       2.00         4.13
28152>      Average Slope     (%)=       1.00         2.00
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      Length            (m)=      30.00        30.00
      Mannings n          =       0.013        0.025

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60        17.60
                   over (min)       5.00         5.00
      Storage Coeff.  (min)=       1.76 (ii)    2.10 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.32         0.31
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.14         0.00          0.137 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.00           1.00
      RUNOFF VOLUME    (mm)=      20.90         5.86          20.75
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.26           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.71   0.020     1.08     5.35
     + ID2= 2 (******):     1.92   0.048     1.08     5.36
       ================================================
       ID = 3 (******):     2.63   0.068     1.08     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     2.63   0.068     1.08     5.36
     + ID2= 2 (******):     8.29   0.953     1.00    20.75
       ================================================
       ID = 1 (******):    10.92   1.013     1.00    17.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    10.92   1.013     1.00    17.04
     + ID2= 2 (******):     1.19   0.137     1.00    20.75
       ================================================
       ID = 3 (******):    12.11   1.149     1.00    17.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    12.11   1.149     1.00    17.41
     + ID2= 2 (******):     3.35   0.127     1.00     7.68
       ================================================
       ID = 1 (******):    15.46   1.276     1.00    15.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    15.46   1.276     1.00    15.30
     + ID2= 2 (******):     3.73   0.146     1.00     7.44
       ================================================
       ID = 3 (******):    19.19   1.422     1.00    13.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):    19.19   1.422     1.00    13.77
     + ID2= 2 (******):     7.09   0.445     1.00    11.13
       ================================================
       ID = 1 (******):    26.28   1.867     1.00    13.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |   1.0509      1.2511
                          0.0499      0.1231   |   1.2225      1.4841
                          0.0887      0.3106   |   1.2743      1.5652
                          0.1027      0.4143   |   1.3240      1.6479
                          0.1415      0.5824   |   1.5681      1.7322
                          0.4137      0.7655   |   1.9730      1.8182
                          0.8423      1.0330   |   2.4824      1.9059

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.279     1.867     1.00      13.06
   OUTFLOW: ID= 1 (******)     26.279     0.086     1.58      13.03
   OVERFLOW:ID= 3 (  0003)      0.000     0.000     0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.61
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2983

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  --------------------------
  | Junction Command(30361002) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3(30361001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30361002)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.70   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.127

      PEAK FLOW       (cms)=   0.019 (i)
      TIME TO PEAK    (hrs)=   1.083
      RUNOFF VOLUME    (mm)=   5.356
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
       ID1= 1 (******):    26.28   0.086     1.58    13.03
     + ID2= 2 (******):     0.00   0.000     0.00     0.00
       ================================================
       ID = 3 ( 50360):    26.28   0.086     1.58    13.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50360):    26.28   0.086     1.58    13.03
     + ID2= 2 (******):     0.70   0.019     1.08     5.36
       ================================================
       ID = 1 ( 50360):    26.98   0.098     1.17    12.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50360):    26.98   0.098     1.17    12.84
     + ID2= 2 ( 60350):   707.75  12.732     1.50    10.46
       ================================================
       ID = 3 ( 50360):   734.73  12.822     1.50    10.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.30        0.0450
                   6.00         127.39        0.0450
                  12.00         127.46        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04        0.0450
                  72.00         123.15        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   122.98    .246E+03       0.4         0.31       10.02
        0.33   123.21    .251E+04      11.8         0.86        3.57
        0.56   123.45    .538E+04      39.9         1.37        2.25
        0.80   123.68    .842E+04      81.1         1.78        1.73
        1.04   123.92    .116E+05     134.5         2.13        1.44
        1.27   124.16    .150E+05     200.0         2.46        1.25
        1.51   124.39    .185E+05     278.3         2.78        1.11
        1.74   124.63    .220E+05     367.4         3.08        1.00
        1.98   124.86    .257E+05     466.7         3.35        0.92
        2.22   125.10    .294E+05     576.1         3.61        0.85
        2.45   125.34    .332E+05     695.4         3.86        0.80
        2.69   125.57    .371E+05     824.8         4.10        0.75
        2.92   125.81    .410E+05     963.8         4.33        0.71
        3.16   126.04    .451E+05    1112.3         4.55        0.68
        3.39   126.28    .492E+05    1270.1         4.76        0.65
        3.63   126.51    .534E+05    1437.3         4.97        0.62
        3.87   126.75    .576E+05    1613.7         5.16        0.60
        4.10   126.99    .620E+05    1791.1         5.33        0.58
        4.34   127.22    .665E+05    1970.4         5.47        0.56

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)   734.73    12.82     1.50   10.55       0.34      0.87
   OUTFLOW: ID= 1 ( 60390)   734.73    14.28     1.58   10.55       0.35      0.89

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| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number   (CN)= 80.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
```

```
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   0.293 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   2.726
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.119

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   0.293     1.08     2.73
      + ID2= 2 ( 60390):   734.73  14.281     1.58    10.55
        ==================================================
        ID = 3 ( 50390):   755.28  14.343     1.58    10.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83         6.10
     Dep. Storage     (mm)=       2.00         6.08
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     345.74        42.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        18.63
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       7.37 (ii)   23.98 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.17         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.06         0.15      1.135 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.25      1.00
     RUNOFF VOLUME    (mm)=      20.90         5.62     13.62
     TOTAL RAINFALL   (mm)=      22.90        22.90     22.90
     RUNOFF COEFFICIENT   =       0.91         0.25      0.59

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        127.70        0.0450
                  18.00        126.87        0.0450
                  24.00        125.30        0.0450
                  30.00        123.90        0.0450
                  36.00        123.14        0.0450
                  42.00        123.07        0.0450
                  48.00        122.88        0.0450
                  54.00        122.90        0.0450
                  60.00        122.95        0.0450
                  66.00        123.04    0.0450 /0.0350  Main Channel
                  72.00        122.86        0.0350      Main Channel
                  78.00        122.98        0.0450
                  84.00        122.97        0.0450
                  90.00        122.96        0.0450
                  96.00        122.92        0.0450
                 102.00        123.50        0.0450
                 108.00        124.18        0.0450
                 120.00        127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
        0.12  122.98    .275E+03         0.7         0.35        6.78
        0.36  123.21    .218E+04        14.7         0.95        2.47
        0.59  123.45    .437E+04        44.6         1.44        1.63
        0.83  123.68    .670E+04        87.2         1.84        1.28
        1.06  123.92    .916E+04       141.6         2.19        1.08
        1.30  124.16    .117E+05       208.1         2.51        0.94
        1.54  124.39    .144E+05       287.0         2.82        0.84
        1.77  124.63    .171E+05       376.7         3.11        0.76
        2.01  124.86    .199E+05       476.5         3.38        0.70
        2.24  125.10    .228E+05       586.1         3.64        0.65
        2.48  125.33    .257E+05       705.6         3.88        0.61
        2.71  125.57    .287E+05       835.1         4.12        0.57
        2.95  125.80    .317E+05       974.0         4.35        0.54
        3.19  126.04    .348E+05      1122.3         4.56        0.52
        3.42  126.28    .379E+05      1279.8         4.77        0.49
        3.66  126.51    .411E+05      1446.6         4.97        0.47
        3.89  126.75    .444E+05      1622.6         5.17        0.46
        4.13  126.98    .477E+05      1786.6         5.29        0.45
        4.36  127.22    .513E+05      1942.9         5.36        0.44

                                  <---- hydrograph ---->   <-pipe / channel->
                                   AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     1.14    1.00  13.62      0.13      0.36
   OUTFLOW: ID= 1 ( 60370)   17.93     1.02    1.00  13.62      0.13      0.35


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--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   755.28  14.343     1.58    10.33
      + ID2= 2 ( 60370):    17.93   1.015     1.00    13.62
        ==================================================
        ID = 3 ( 50400):   773.21  14.557     1.58    10.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        125.01        0.0450
                  20.00        123.70        0.0450
                  25.00        123.04        0.0450
                  30.00        120.84        0.0450
                  35.00        119.81    0.0450 /0.0350  Main Channel
                  40.00        119.74        0.0350      Main Channel
                  65.00        120.12        0.0450
                  90.00        120.58        0.0450
                 100.00        125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)        (m/s)       (min)
        0.07  119.81    .209E+03         0.1         0.27       34.81
        0.35  120.09    .326E+04         4.7         0.83       11.50
        0.62  120.36    .916E+04        21.3         1.34        7.16
        0.90  120.63    .176E+05        51.5         1.68        5.69
        1.17  120.91    .270E+05        96.6         2.05        4.67
        1.44  121.18    .367E+05       153.8         2.41        3.98
        1.72  121.46    .466E+05       222.1         2.74        3.50
        1.99  121.73    .567E+05       300.7         3.05        3.14
        2.26  122.00    .669E+05       389.1         3.34        2.87
        2.54  122.28    .774E+05       487.1         3.62        2.65
        2.81  122.55    .880E+05       594.2         3.88        2.47
        3.09  122.82    .988E+05       710.4         4.13        2.32
        3.36  123.10    .110E+06       834.4         4.36        2.20
        3.63  123.37    .121E+06       964.4         4.57        2.10
        3.91  123.65    .133E+06      1104.4         4.76        2.01
        4.18  123.92    .145E+06      1250.0         4.93        1.94
        4.45  124.19    .159E+06      1406.7         5.09        1.88
        4.73  124.47    .172E+06      1575.5         5.25        1.82
        5.00  124.74    .187E+06      1756.1         5.39        1.77

                                  <---- hydrograph ---->   <-pipe / channel->
                                   AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                   (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  773.21    14.56    1.58  10.41      0.51      1.07
   OUTFLOW: ID= 1 ( 60400)  773.21    11.76    1.67  10.41      0.46      0.99


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--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area     (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.24
                   over (min)       5.00       240.00
     Storage Coeff.  (min)=       6.33 (ii)  239.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00       240.00
     Unit Hyd. peak  (cms)=       0.19         0.00
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.23         0.01      0.226 (iii)
     TIME TO PEAK    (hrs)=       1.00         4.92      1.00
     RUNOFF VOLUME    (mm)=      20.90         2.38      7.00
     TOTAL RAINFALL   (mm)=      22.90        22.90     22.90
     RUNOFF COEFFICIENT   =       0.91         0.10      0.31

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40410):     7.92   0.226     1.00     7.00
      + ID2= 2 ( 60400):   773.21  11.760     1.67    10.41
        ==================================================
        ID = 3 ( 50410):   781.12  11.764     1.67    10.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.030 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.360
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
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                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.197

     PEAK FLOW       (cms)=   0.030 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.359
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.12   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.477

     PEAK FLOW       (cms)=   0.078 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.363
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.12   0.078     1.17     5.36
      + ID2= 2 (******):     1.24   0.030     1.08     5.36
        ================================================
        ID = 3 (******):     5.36   0.107     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     5.36   0.107     1.17     5.36
      + ID2= 2 (******):     1.28   0.030     1.08     5.36
        ================================================
        ID = 1 (******):     6.64   0.136     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area     (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       20.95         46.62
     Dep. Storage     (mm)=        2.00          7.70
     Average Slope     (%)=        1.90          1.90
     Length            (m)=      671.17         89.00
     Mannings n           =       0.015         0.240

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          5.00
                   over (min)       10.00         50.00
     Storage Coeff.  (min)=      10.22 (ii)    47.69 (ii)
     Unit Hyd. Tpeak (min)=      10.00         50.00
     Unit Hyd. peak  (cms)=       0.11          0.02
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.76          0.33          1.820 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.75           1.00
     RUNOFF VOLUME    (mm)=      20.90          3.54           7.88
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.15           0.34

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):    67.57   1.820     1.00     7.88
      + ID2= 2 (******):     6.64   0.136     1.17     5.36
        ================================================
        ID = 3 (******):    74.21   1.924     1.00     7.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):   781.12  11.764     1.67    10.38
      + ID2= 2 (******):    74.21   1.924     1.00     7.66
        ================================================
        ID = 3 ( 50420):   855.33  12.245     1.67    10.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         121.79        0.0450
                 12.00         116.08        0.0450
                 40.00         115.59    0.0450 /0.0350  Main Channel
                 44.00         114.89        0.0350      Main Channel
                 48.00         114.52        0.0350      Main Channel
                 52.00         115.72    0.0350 /0.0450  Main Channel
                 56.00         115.93        0.0450
                 60.00         117.24        0.0450
                 64.00         119.04        0.0450
                 68.00         120.69        0.0450
                 72.00         121.01        0.0450
                 74.00         121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.36   114.88    .645E+03       0.7         0.83      14.38
       0.71   115.23    .236E+04       4.6         1.41       8.47
       1.07   115.59    .489E+04      12.6         1.84       6.48
       1.44   115.96    .112E+05      30.9         1.97       6.04
       1.80   116.33    .227E+05      69.1         2.17       5.49
       2.17   116.70    .351E+05     125.6         2.56       4.65
       2.54   117.06    .479E+05     197.5         2.95       4.04
       2.91   117.43    .612E+05     283.9         3.32       3.59
       3.28   117.80    .749E+05     384.1         3.66       3.25
       3.65   118.17    .891E+05     497.4         3.99       2.99
       4.02   118.54    .104E+06     623.5         4.30       2.77
       4.39   118.91    .119E+06     762.2         4.59       2.60
       4.76   119.28    .134E+06     913.1         4.87       2.45
       5.13   119.65    .150E+06    1076.2         5.13       2.32
       5.49   120.02    .166E+06    1251.7         5.38       2.21
       5.86   120.39    .183E+06    1439.5         5.62       2.12
       6.23   120.75    .200E+06    1634.3         5.84       2.04
       6.60   121.12    .219E+06    1831.3         5.99       1.99
       6.97   121.49    .238E+06    2058.5         6.20       1.92

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50420)   855.33    12.25     1.67   10.14      1.05       1.82
   OUTFLOW: ID= 1 ( 60420)   855.33    11.29     1.83   10.14      1.01       1.75

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area     (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       21.41         11.03
     Dep. Storage     (mm)=        2.00          7.80
     Average Slope     (%)=        3.50          3.50
     Length            (m)=      465.00        102.00
     Mannings n           =       0.015         0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          3.86
                   over (min)        5.00         55.00
     Storage Coeff.  (min)=       6.83 (ii)    51.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00         55.00
     Unit Hyd. peak  (cms)=       0.18          0.02
                                                    *TOTALS*
     PEAK FLOW       (cms)=       2.35          0.06          2.361 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.83           1.00
     RUNOFF VOLUME    (mm)=      20.90          3.09          14.49
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.13           0.63

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   2.361     1.00    14.49
      + ID2= 2 ( 60420):   855.33  11.285     1.83    10.14
        ================================================
        ID = 3 ( 50430):   887.77  11.356     1.83    10.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         116.29        0.0450
                 20.00         114.05        0.0450
                 25.00         110.83        0.0450
                 30.00         109.36        0.0450
                 35.00         108.23    0.0450 /0.0350  Main Channel
                 40.00         107.52        0.0350      Main Channel
                 45.00         108.00    0.0350 /0.0450  Main Channel
                 50.00         107.84        0.0450
                 55.00         108.21        0.0450
                 60.00         108.95        0.0450
                 65.00         109.35        0.0450
                 70.00         109.41        0.0450
                 75.00         109.48        0.0450
                 80.00         109.77        0.0450
                 85.00         112.20        0.0450
                 90.00         115.48        0.0450
                100.00         116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.24   107.76    .285E+03       0.4         0.74      12.74
       0.48   108.00    .146E+04       2.6         1.01       9.32
       0.97   108.49    .695E+04      23.3         1.90       4.97
       1.46   108.97    .141E+05      64.5         2.60       3.63
       1.94   109.46    .233E+05     116.9         2.84       3.33
       2.43   109.95    .371E+05     214.6         3.28       2.88
       2.92   110.44    .519E+05     350.2         3.83       2.47
       3.41   110.92    .675E+05     515.9         4.34       2.18
       3.89   111.41    .836E+05     711.3         4.82       1.96
       4.38   111.90    .100E+06     933.4         5.28       1.79
       4.87   112.39    .117E+06    1182.4         5.71       1.65
       5.35   112.87    .135E+06    1458.0         6.13       1.54
       5.84   113.36    .153E+06    1758.3         6.52       1.45
       6.33   113.85    .171E+06    2082.9         6.90       1.37
```

```
        6.82   114.34    .190E+06    2410.6          7.19       1.31
        7.30   114.82    .210E+06    2758.9          7.43       1.27
        7.79   115.31    .232E+06    3143.1          7.68       1.23
        8.28   115.80    .255E+06    3473.3          7.71       1.23
        8.77   116.29    .282E+06    3812.4          7.67       1.23

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  887.77    11.36    1.83  10.30      0.69      1.26
   OUTFLOW: ID= 1 ( 60430)  887.77    10.45    1.92  10.30      0.66      1.23


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--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area     (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70        19.42
     Dep. Storage     (mm)=       2.00         6.60
     Average Slope     (%)=       2.50         2.50
     Length            (m)=     617.06        45.00
     Mannings n          =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         4.55
                   over (min)      10.00        40.00
     Storage Coeff.  (min)=       8.95 (ii)   35.60 (ii)
     Unit Hyd. Tpeak (min)=      10.00        40.00
     Unit Hyd. peak  (cms)=       0.12         0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       3.98         0.12       4.011 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.58       1.00
     RUNOFF VOLUME    (mm)=      20.90         2.69      14.53
     TOTAL RAINFALL   (mm)=      22.90        22.90      22.90
     RUNOFF COEFFICIENT   =       0.91         0.12       0.63


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40440):    57.11   4.011     1.00    14.53
     + ID2= 2 ( 60430):   887.77  10.452     1.92    10.30
       ================================================
       ID = 3 ( 50440):   944.88  10.568     1.92    10.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         104.01        0.0450
                 10.00         103.90        0.0450
                 20.00         103.74        0.0450
                 30.00         103.66        0.0450
                 40.00         103.60        0.0450
                 50.00         102.52        0.0450
                 60.00         101.16        0.0450
                 70.00         100.60        0.0450
                 80.00         100.17        0.0450
                 90.00          99.85        0.0450
                100.00          97.89        0.0350      Main Channel
                110.00          97.62        0.0350      Main Channel
                120.00          99.12        0.0450
                130.00          99.16        0.0450
                140.00          99.36        0.0450
                150.00          99.66        0.0450
                160.00          99.68        0.0450
                180.00          99.76        0.0450
                190.00         104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27   97.89    .102E+04        1.2         0.77      13.74
        0.60   98.21    .381E+04        9.4         1.56       6.74
        0.92   98.53    .738E+04       24.3         2.08       5.05
        1.24   98.86    .117E+05       46.2         2.50       4.22
        1.56   99.18    .171E+05       76.6         2.84       3.71
        1.89   99.50    .264E+05      124.5         2.98       3.53
        2.21   99.82    .403E+05      189.1         2.96       3.56
        2.53  100.15    .597E+05      286.1         3.03       3.48
        2.85  100.47    .809E+05      417.7         3.26       3.23
        3.17  100.79    .104E+06      580.2         3.53       2.98
        3.50  101.11    .128E+06      771.7         3.81       2.77
        3.82  101.44    .153E+06      996.3         4.10       2.57
        4.14  101.76    .179E+06     1248.4         4.40       2.40
        4.46  102.08    .206E+06     1526.4         4.68       2.25
        4.79  102.40    .233E+06     1829.8         4.96       2.13
        5.11  102.73    .261E+06     2156.4         5.22       2.02
        5.43  103.05    .290E+06     2507.0         5.47       1.93
        5.75  103.37    .319E+06     2882.7         5.71       1.85
        6.08  103.69    .350E+06     3194.7         5.77       1.83

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  944.88    10.57    1.92  10.55      0.62      1.59
   OUTFLOW: ID= 1 ( 60440)  944.88    10.73    2.00  10.55      0.62      1.60


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--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area     (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37        17.02
     Dep. Storage     (mm)=       2.00         6.90
     Average Slope     (%)=       0.80         0.80
     Length            (m)=     450.16       150.00
     Mannings n          =      0.015        0.300

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.87
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       6.84 (ii)   21.41 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.18         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.34         0.15       1.415 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.25       1.00
     RUNOFF VOLUME    (mm)=      20.90         4.12      12.98
     TOTAL RAINFALL   (mm)=      22.90        22.90      22.90
     RUNOFF COEFFICIENT   =       0.91         0.18       0.57


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        2.91
                   over (min)      10.00      105.00
     Storage Coeff.  (min)=      10.43 (ii)  104.71 (ii)
     Unit Hyd. Tpeak (min)=      10.00      105.00
     Unit Hyd. peak  (cms)=       0.11        0.01
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.29        0.05       1.295 (iii)
     TIME TO PEAK    (hrs)=       1.00        2.67       1.00
     RUNOFF VOLUME    (mm)=      20.90        3.03      10.35
     TOTAL RAINFALL   (mm)=      22.90       22.90      22.90
     RUNOFF COEFFICIENT   =       0.91        0.13       0.45


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50450)|
| 1 +  2 =  3      |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40450):    30.40   1.295     1.00    10.35
     + ID2= 2 ( 60440):   944.88  10.733     2.00    10.55
       ================================================
       ID = 3 ( 50450):   975.28  10.778     2.00    10.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          97.16        0.0450
                  3.00          96.00        0.0450
                  6.00          95.32        0.0450
                  9.00          94.64        0.0450
                 12.00          94.43        0.0450
                 15.00          94.29        0.0450
                 18.00          94.10        0.0350      Main Channel
                 21.00          94.02        0.0350      Main Channel
                 24.00          93.70        0.0350      Main Channel
                 27.00          94.22    0.0350 /0.0450  Main Channel
                 30.00          94.90        0.0450
                 32.00          95.30        0.0450
                 34.00          95.78        0.0450
                 36.00          96.25        0.0450
                 38.00          96.60        0.0450
                 48.00          97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13   93.83    .942E+02        0.1         0.39      30.45
        0.27   93.96    .377E+03        0.3         0.62      19.18
        0.40   94.09    .911E+03        0.9         0.69      17.28
        0.59   94.29    .230E+04        3.4         1.06      11.15
        0.78   94.48    .428E+04        7.9         1.32       8.98
        0.97   94.67    .679E+04       14.6         1.53       7.74
        1.16   94.86    .963E+04       23.7         1.75       6.77
        1.35   95.05    .127E+05       34.9         1.96       6.07
        1.54   95.24    .160E+05       48.1         2.14       5.54
        1.73   95.43    .196E+05       63.6         2.31       5.13
        1.92   95.62    .233E+05       81.2         2.48       4.79
        2.11   95.81    .273E+05      101.0         2.63       4.51
        2.30   96.00    .315E+05      123.0         2.78       4.27
        2.49   96.19    .360E+05      147.8         2.93       4.06
        2.68   96.38    .406E+05      174.6         3.07       3.87
        2.87   96.57    .454E+05      203.7         3.20       3.71
        3.06   96.76    .505E+05      232.7         3.28       3.62
        3.25   96.95    .562E+05      264.9         3.36       3.54
        3.44   97.14    .624E+05      300.8         3.43       3.46

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450)  975.28    10.78    2.00  10.55      0.86      1.40
   OUTFLOW: ID= 1 ( 60450)  975.28    10.04    2.17  10.55      0.84      1.38


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40460)|   Area     (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36         7.04
     Dep. Storage     (mm)=       2.00         6.68
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     386.43        40.00
     Mannings n          =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.87
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       6.84 (ii)   21.41 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.18         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.34         0.15       1.415 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.25       1.00
     RUNOFF VOLUME    (mm)=      20.90         4.12      12.98
     TOTAL RAINFALL   (mm)=      22.90        22.90      22.90
     RUNOFF COEFFICIENT   =       0.91         0.18       0.57


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
```

```
                        (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40460):    22.40   1.415     1.00    12.98
       + ID2= 2 ( 60450):   975.28  10.043     2.17    10.55
         ================================================
         ID = 3 ( 50460):   997.68  10.078     2.17    10.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

```
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         91.61        0.0450
                   3.00         91.57        0.0450
                   6.00         91.15        0.0450
                   9.00         90.70        0.0450
                  12.00         89.72        0.0450
                  15.00         88.86        0.0450
                  18.00         88.38    0.0450 /0.0350  Main Channel
                  21.00         87.96        0.0350      Main Channel
                  24.00         88.18    0.0350 /0.0450  Main Channel
                  26.00         88.19        0.0450
                  28.00         88.30        0.0450
                  30.00         90.32        0.0450
                  32.00         90.49        0.0450
                  34.00         90.80        0.0450
                  36.00         90.85        0.0450
                  38.00         90.97        0.0450
                  40.00         91.15        0.0450
                  42.00         91.29        0.0450
                  44.00         91.40        0.0450
                  46.00         91.56        0.0450
```

```
      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11    88.07    .589E+02       0.0         0.34       23.89
        0.21    88.18    .235E+03       0.3         0.54       15.05
        0.41    88.38    .106E+04       1.8         0.85        9.64
        0.61    88.57    .211E+04       5.3         1.22        6.69
        0.81    88.77    .330E+04      10.2         1.51        5.40
        1.01    88.97    .462E+04      16.6         1.76        4.63
        1.21    89.17    .603E+04      24.5         1.99        4.10
        1.41    89.37    .753E+04      33.8         2.19        3.72
        1.61    89.57    .912E+04      44.4         2.38        3.42
        1.81    89.77    .108E+05      56.4         2.56        3.19
        2.00    89.97    .125E+05      69.9         2.72        2.99
        2.20    90.17    .144E+05      84.7         2.88        2.83
        2.40    90.37    .163E+05      99.8         3.00        2.72
        2.60    90.56    .184E+05     114.7         3.04        2.68
        2.80    90.76    .208E+05     132.8         3.13        2.61
        3.00    90.96    .235E+05     148.4         3.09        2.64
        3.20    91.16    .266E+05     170.7         3.13        2.60
        3.40    91.36    .302E+05     194.9         3.16        2.58
        3.60    91.56    .342E+05     223.5         3.20        2.55
```

```
                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50460)  997.68    10.08     2.17   10.60      0.81       1.50
OUTFLOW: ID= 1 ( 60460)  997.68     9.97     2.25   10.60      0.80       1.49
```

```
| CALIB             |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
```

```
                           IMPERVIOUS    PERVIOUS (i)
Surface Area     (ha)=       59.53         30.66
Dep. Storage     (mm)=        2.00          5.90
Average Slope     (%)=        1.40          1.40
Length            (m)=      775.42         40.00
Mannings n           =       0.015         0.280
```

```
NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

```
                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
```

```
Max.Eff.Inten.(mm/hr)=      41.60         14.11
            over (min)      10.00         35.00
Storage Coeff.  (min)=      12.21 (ii)    30.62 (ii)
Unit Hyd. Tpeak (min)=      10.00         35.00
Unit Hyd. peak  (cms)=       0.10          0.04
                                                  *TOTALS*
PEAK FLOW       (cms)=       4.82          0.47      4.986 (iii)
TIME TO PEAK    (hrs)=       1.00          1.42       1.00
RUNOFF VOLUME    (mm)=      20.90          4.43      13.33
TOTAL RAINFALL   (mm)=      22.90         22.90      22.90
RUNOFF COEFFICIENT   =       0.91          0.19       0.58
```

```
  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  76.1    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
     ID1= 1 ( 40470):    90.19   4.986     1.00    13.33
   + ID2= 2 ( 60460):   997.68   9.972     2.25    10.60
     ================================================
     ID = 3 ( 50470):  1087.87  10.179     2.25    10.83

  NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

```
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         89.19        0.0450
                   2.00         88.89        0.0450
                   4.00         88.54        0.0450
                   6.00         88.31        0.0450
                   8.00         88.14        0.0450
                  10.00         88.02        0.0450
                  12.00         87.99        0.0450
                  14.00         87.90        0.0450
                  16.00         87.84        0.0450
                  19.00         87.55        0.0450
                  22.00         86.85        0.0450
                  25.00         86.23        0.0350      Main Channel
                  28.00         86.23        0.0350      Main Channel
                  31.00         86.60        0.0450
                  34.00         87.49        0.0450
                  37.00         88.15        0.0450
                  41.00         88.21        0.0450
                  45.00         88.29        0.0450
                  48.00         88.36        0.0450
                  50.00         89.13        0.0450
```

```
      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01    86.23    .467E+01       0.0         0.03      307.39
        0.16    86.38    .381E+03       0.3         0.45       22.82
        0.31    86.54    .942E+03       1.0         0.65       15.77
        0.46    86.69    .167E+04       2.3         0.85       12.10
        0.61    86.84    .253E+04       4.2         1.03        9.95
        0.77    86.99    .350E+04       6.7         1.18        8.66
        0.92    87.15    .458E+04       9.8         1.32        7.78
        1.07    87.30    .576E+04      13.5         1.44        7.13
        1.22    87.45    .706E+04      17.7         1.54        6.63
        1.38    87.60    .847E+04      22.5         1.63        6.28
        1.53    87.76    .101E+05      27.8         1.69        6.05
        1.68    87.91    .119E+05      33.3         1.72        5.97
        1.83    88.06    .142E+05      39.8         1.72        5.96
        1.99    88.21    .170E+05      47.4         1.71        5.97
        2.14    88.36    .206E+05      57.3         1.71        5.99
        2.29    88.52    .247E+05      70.7         1.76        5.81
        2.44    88.67    .289E+05      86.1         1.83        5.59
        2.60    88.82    .332E+05     103.2         1.91        5.36
        2.75    88.97    .376E+05     121.7         1.99        5.15
```

```
                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50470) 1087.87    10.18     2.25   10.83      0.93       1.33
OUTFLOW: ID= 1 ( 60470) 1087.87     9.86     2.33   10.83      0.92       1.32
```

```
| CALIB             |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
```

```
                           IMPERVIOUS    PERVIOUS (i)
Surface Area     (ha)=       42.82         13.61
Dep. Storage     (mm)=        2.00          5.80
Average Slope     (%)=        1.90          1.90
Length            (m)=      613.35         40.00
Mannings n           =       0.015         0.260
```

```
NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

```
                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
   0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
   0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
   0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
   0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
   0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
   0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
   0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
   0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
   0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
   0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
```

```
Max.Eff.Inten.(mm/hr)=      41.60         28.83
            over (min)      10.00         25.00
Storage Coeff.  (min)=       9.68 (ii)    21.75 (ii)
Unit Hyd. Tpeak (min)=      10.00         25.00
Unit Hyd. peak  (cms)=       0.11          0.05
                                                  *TOTALS*
PEAK FLOW       (cms)=       3.51          0.50      3.788 (iii)
TIME TO PEAK    (hrs)=       1.00          1.25       1.00
RUNOFF VOLUME    (mm)=      20.90          6.40      14.95
TOTAL RAINFALL   (mm)=      22.90         22.90      22.90
RUNOFF COEFFICIENT   =       0.91          0.28       0.65
```

```
  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  78.9    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
     ID1= 1 ( 40480):    56.43   3.788     1.00    14.95
   + ID2= 2 ( 60470):  1087.87   9.856     2.33    10.83
     ================================================
     ID = 3 ( 50480):  1144.30  11.736     1.08    11.03

  NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
```

```
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         86.90        0.0450
                   2.00         86.76        0.0450
                   4.00         85.96        0.0450
                   6.00         85.44        0.0450
                   8.00         84.83        0.0450
                  10.00         84.50        0.0450
                  12.00         84.15        0.0450
                  14.00         83.85        0.0350      Main Channel
                  16.00         83.86        0.0350      Main Channel
                  18.00         83.99    0.0350 /0.0450  Main Channel
                  20.00         84.27        0.0450
                  22.00         84.55        0.0450
                  24.00         84.88        0.0450
                  26.00         85.37        0.0450
                  27.00         85.68        0.0450
                  28.00         85.91        0.0450
                  29.00         86.08        0.0450
                  30.00         86.21        0.0450
                  31.00         86.29        0.0450
                  34.00         86.87        0.0450
```

```
      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16    84.01    .165E+03       0.3         0.48       10.34
        0.32    84.17    .460E+03       1.2         0.77        6.41
        0.48    84.33    .855E+03       2.8         0.98        5.07
        0.64    84.48    .135E+04       5.2         1.14        4.35
        0.80    84.64    .193E+04       8.3         1.28        3.88
        0.95    84.80    .261E+04      12.3         1.40        3.53
        1.11    84.96    .337E+04      17.4         1.53        3.23
        1.27    85.12    .419E+04      23.5         1.66        2.97
        1.43    85.28    .506E+04      30.5         1.79        2.77
        1.59    85.44    .599E+04      38.5         1.90        2.60
        1.75    85.60    .697E+04      47.3         2.01        2.46
        1.91    85.76    .801E+04      57.1         2.12        2.34
        2.07    85.92    .911E+04      67.8         2.21        2.24
        2.23    86.07    .103E+05      79.5         2.30        2.15
        2.39    86.23    .115E+05      91.9         2.37        2.09
        2.54    86.39    .128E+05     105.7         2.45        2.02
        2.70    86.55    .142E+05     121.2         2.53        1.95
        2.86    86.71    .156E+05     138.0         2.62        1.89
        3.02    86.87    .171E+05     153.0         2.65        1.87
```

```
                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50480) 1144.30    11.74     1.08   11.03      0.93       1.38
OUTFLOW: ID= 1 ( 60480) 1144.30    11.57     1.17   11.03      0.92       1.38
```

```
                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60          4.16
     Dep. Storage     (mm)=       2.00          6.22
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     334.28         53.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         21.96
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       7.37 (ii)    25.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.17          0.04
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.14          0.12      1.189 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.33       1.00
     RUNOFF VOLUME    (mm)=      20.90          5.85      14.94
     TOTAL RAINFALL   (mm)=      22.90         22.90      22.90
     RUNOFF COEFFICIENT   =       0.91          0.26       0.65

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40490):    16.76   1.189     1.00    14.94
     + ID2= 2 ( 60480):  1144.30  11.569     1.17    11.03
       ==========================================================
       ID = 3 ( 50490):  1161.06  12.010     1.17    11.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation      Manning
                   0.00          85.84       0.0450
                   6.00          84.32       0.0450
                  12.00          84.21       0.0450
                  18.00          84.12       0.0450
                  24.00          84.08       0.0450
                  30.00          84.10       0.0450
                  36.00          84.03       0.0450
                  42.00          83.92       0.0450
                  48.00          83.88       0.0450
                  54.00          82.88       0.0350      Main Channel
                  60.00          83.12    0.0350 /0.0450 Main Channel
                  64.00          83.65       0.0450
                  68.00          83.60       0.0450
                  72.00          83.67       0.0450
                  76.00          83.70       0.0450
                  80.00          83.82       0.0450
                  84.00          83.90       0.0450
                  88.00          84.05       0.0450
                  92.00          84.16       0.0450
                 100.00          85.83       0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03       0.1         0.32       46.08
        0.31   83.19    .129E+04       0.8         0.57       26.14
        0.47   83.35    .259E+04       2.3         0.79       18.75
        0.62   83.50    .418E+04       4.5         0.96       15.43
        0.78   83.66    .626E+04       7.3         1.04       14.28
        0.93   83.81    .101E+05      11.9         1.05       14.10
        1.09   83.97    .153E+05      17.6         1.02       14.55
        1.24   84.13    .231E+05      26.2         1.00       14.73
        1.40   84.28    .341E+05      41.2         1.07       13.79
        1.55   84.44    .460E+05      61.7         1.19       12.44
        1.71   84.59    .582E+05      86.6         1.32       11.21
        1.86   84.75    .706E+05     115.2         1.45       10.21
        2.02   84.90    .831E+05     147.5         1.57        9.39
        2.17   85.06    .959E+05     183.2         1.70        8.72
        2.33   85.21    .109E+06     222.2         1.81        8.16
        2.48   85.37    .122E+06     264.5         1.93        7.68
        2.64   85.52    .135E+06     310.0         2.03        7.27
        2.79   85.68    .149E+06     358.5         2.14        6.91
        2.95   85.83    .162E+06     410.1         2.24        6.60

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 50490) 1161.06    12.01    1.17  11.09      0.93      1.05
  OUTFLOW: ID= 1 ( 60490) 1161.06     9.97    1.42  11.09      0.86      1.04

--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92          4.72
     Dep. Storage     (mm)=       2.00          5.43
     Average Slope     (%)=       2.10          2.10
     Length            (m)=     370.92         40.00
     Mannings n           =      0.015         0.260

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60          4.48
                   over (min)       5.00         35.00
     Storage Coeff.  (min)=       4.82 (ii)    33.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         35.00
     Unit Hyd. peak  (cms)=       0.22          0.03
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.19          0.05      0.199 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.50       1.00
     RUNOFF VOLUME    (mm)=      20.90          2.47       5.69
     TOTAL RAINFALL   (mm)=      22.90         22.90      22.90
     RUNOFF COEFFICIENT   =       0.91          0.11       0.25

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------           (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40810):    20.64   1.568     1.00    15.30
     + ID2= 2 ( 60490):  1161.06   9.967     1.42    11.09
       ==========================================================
       ID = 3 ( 50810):  1181.70  10.217     1.42    11.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52          6.81
     Dep. Storage     (mm)=       2.00          9.76
     Average Slope     (%)=       3.20          3.20
     Length            (m)=     249.31         47.00
     Mannings n           =      0.015         0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
  0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
  0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
  0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
  0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
  0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
  0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
  0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
  0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
  0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.023 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.358
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89          0.04
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.40          1.00
     Length            (m)=     115.50          0.00
     Mannings n           =      0.013         0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
  0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
```

```
                0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.38
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       5.21 (ii)    5.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.21         0.16
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.45         0.00          0.448 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.00           1.00
     RUNOFF VOLUME    (mm)=      20.90         5.36          20.74
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.23           0.91

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.38
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       3.09 (ii)    3.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.27         0.27
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.05         0.00          0.052 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.00           1.00
     RUNOFF VOLUME    (mm)=      20.90         5.36          20.74
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.23           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25        13.25
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     420.00        30.00
     Mannings n           =      0.013        0.025

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        30.05
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       6.97 (ii)    9.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.17         0.11
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.90         0.80          1.699 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.00           1.00
     RUNOFF VOLUME    (mm)=      20.90         7.50          11.52
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.33           0.50

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    1.8600      0.9862
                         0.0560      0.3250   |    2.1000      1.0580
                         0.2600      0.4718   |    2.2000      1.2000
                         0.7400      0.6512   |   10.0000      1.2500
                         1.4100      0.8427   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)    26.500     1.699      1.00      11.52
   OUTFLOW: ID= 1 (******)    26.500     0.047      1.75      11.47
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.78
                  TIME SHIFT OF PEAK FLOW         (min)= 45.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2751

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30651006) |
  --------------------------

                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651003)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2(30651006)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    26.50   0.047     1.75    11.47
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    26.50   0.047     1.75    11.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    26.50   0.047     1.75    11.47
      + ID2= 2 (******):     0.93   0.023     1.08     5.36
        ================================================
        ID = 1 (******):    27.43   0.061     1.17    11.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    27.43   0.061     1.17    11.26
      + ID2= 2 (******):     3.93   0.448     1.00    20.74
        ================================================
        ID = 3 (******):    31.36   0.496     1.00    12.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    31.36   0.496     1.00    12.45
      + ID2= 2 (******):     0.45   0.052     1.00    20.74
        ================================================
        ID = 1 (******):    31.81   0.547     1.00    12.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   0.214 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   5.364
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62   0.214     1.33     5.36
      + ID2= 2 (******):    31.81   0.547     1.00    12.57
        ================================================
        ID = 3 (******):    46.43   0.655     1.00    10.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0450
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.05   441.45    .114E+03       0.0         0.27       55.89
         0.11   441.50    .457E+03       0.2         0.43       35.21
         0.16   441.56    .103E+04       0.6         0.57       26.87
         0.22   441.61    .185E+04       1.4         0.67       22.84
         0.27   441.67    .297E+04       2.5         0.77       19.84
         0.33   441.72    .437E+04       4.1         0.87       17.59
         0.38   441.78    .605E+04       6.4         0.96       15.85
         0.44   441.83    .802E+04       9.2         1.05       14.47
         0.49   441.89    .103E+05      12.8         1.14       13.35
         0.55   441.94    .128E+05      17.2         1.23       12.42
         0.60   442.00    .157E+05      22.4         1.31       11.63
         0.66   442.05    .188E+05      28.3         1.38       11.07
         0.71   442.11    .225E+05      36.9         1.50       10.16
         0.78   442.17    .277E+05      48.4         1.60        9.54
         0.84   442.24    .339E+05      61.9         1.67        9.13
```

```
        0.91   442.30    .412E+05      77.1          1.71       8.90
        0.97   442.36    .495E+05      94.7          1.75       8.71
        1.03   442.43    .589E+05     114.9          1.79       8.54
        1.10   442.49    .693E+05     137.9          1.82       8.38

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
    INFLOW : ID= 2 (******)   46.43     0.66    1.00  10.30      0.17      0.57
    OUTFLOW: ID= 1 (******)   46.43     0.33    1.08  10.30      0.12      0.46



--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.92     0.00     0.00     0.00     0.00     0.92
       1.00     0.73     0.00     0.00     0.00     1.73
       1.00     1.11     0.00     0.00     0.00     2.11
       1.00     1.60     0.00     0.00     0.00     2.60
       1.00     2.08     0.00     0.00     0.00     3.08
       1.00     2.63     0.00     0.00     0.00     3.63
       1.00     4.53     0.00     0.00     0.00     5.53

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  46.43      0.33      1.08   10.30
     ================================================
     ID= 2  (   2)    :  46.43      0.33      1.08   10.30
     ID= 3  (   2)    :   0.00      0.00      0.00    0.00
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         443.75        0.0000
                   8.50         443.74        0.0450
                  35.47         443.64        0.0450
                  64.60         443.29        0.0450
                  74.71         443.18        0.0450
                  80.25         443.17        0.0450
                 112.17         443.12     0.0450 /0.0350  Main Channel
                 131.57         442.76        0.0350       Main Channel
                 137.50         442.66        0.0350       Main Channel
                 137.91         442.67        0.0350       Main Channel
                 152.28         442.24        0.0350       Main Channel
                 167.40         441.39        0.0350       Main Channel
                 178.29         441.56        0.0350       Main Channel
                 216.75         442.01        0.0350       Main Channel
                 221.54         442.05     0.0350 /0.0450  Main Channel
                 334.66         442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.05   441.45    .128E+03       0.0          0.29      60.12
        0.11   441.50    .514E+03       0.2          0.45      37.87
        0.16   441.56    .116E+04       0.7          0.59      28.90
        0.22   441.61    .208E+04       1.4          0.70      24.57
        0.27   441.67    .333E+04       2.6          0.80      21.34
        0.33   441.72    .490E+04       4.3          0.91      18.92
        0.38   441.78    .680E+04       6.6          1.01      17.05
        0.44   441.83    .901E+04       9.6          1.10      15.57
        0.49   441.89    .115E+05      13.4          1.19      14.36
        0.55   441.94    .144E+05      18.0          1.28      13.36
        0.60   442.00    .176E+05      23.4          1.37      12.51
        0.66   442.05    .211E+05      29.5          1.44      11.91
        0.71   442.11    .253E+05      38.5          1.57      10.93
        0.78   442.17    .311E+05      50.5          1.67      10.26
        0.84   442.24    .381E+05      64.7          1.74       9.82
        0.91   442.30    .463E+05      80.5          1.79       9.57
        0.97   442.36    .556E+05      98.9          1.83       9.37
        1.03   442.43    .661E+05     120.0          1.86       9.19
        1.10   442.49    .779E+05     144.1          1.90       9.01

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
    INFLOW : ID= 2 (******)   46.43     0.33    1.08  10.30      0.12      0.48
    OUTFLOW: ID= 1 (******)   46.43     0.24    1.83  10.29      0.11      0.46



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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.061 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   5.364
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.24   0.061     1.33     5.36
      + ID2= 2 (******):    46.43   0.242     1.83    10.29
        ================================================
        ID = 3 (******):    50.67   0.282     1.67     9.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.054 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.362
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.59   0.054     1.17     5.36
      + ID2= 2 (******):    50.67   0.282     1.67     9.88
        ================================================
        ID = 3 (******):    53.26   0.300     1.67     9.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         429.12        0.0500
                  37.54         428.86        0.0500
                  53.31         428.70        0.0500
                  81.17         428.24        0.0500
                  99.28         428.15     0.0500 /0.0300  Main Channel
                 114.53         427.72        0.0300       Main Channel
                 119.88         426.51        0.0300       Main Channel
                 124.17         425.84        0.0300       Main Channel
                 206.01         425.90        0.0300       Main Channel
                 209.64         426.51        0.0300       Main Channel
                 214.21         426.89        0.0300       Main Channel
                 231.49         427.17        0.0300       Main Channel
                 268.61         427.89     0.0300 /0.0500  Main Channel
                 351.58         428.15        0.0500
                 368.27         428.31        0.0500
                 405.75         428.52        0.0500
                 416.79         428.59        0.0500
                 440.06         428.76        0.0500
                 469.88         428.97        0.0500

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)       (m/s)      (min)
        0.16   426.00    .187E+04       9.2          0.88       3.40
        0.31   426.16    .424E+04      35.4          1.49       2.00
        0.47   426.32    .666E+04      74.1          1.98       1.50
        0.63   426.47    .914E+04     123.7          2.41       1.23
        0.79   426.63    .117E+05     182.8          2.79       1.07
        0.94   426.79    .143E+05     251.2          3.13       0.95
        1.10   426.95    .170E+05     323.1          3.39       0.88
        1.26   427.10    .199E+05     394.0          3.52       0.84
        1.42   427.26    .232E+05     479.1          3.69       0.81
        1.57   427.42    .267E+05     577.3          3.86       0.77
        1.73   427.58    .304E+05     687.4          4.03       0.74
        1.89   427.73    .344E+05     808.6          4.20       0.71
        2.05   427.89    .387E+05     927.4          4.28       0.70
        2.23   428.07    .449E+05    1119.2          4.45       0.67
        2.41   428.25    .531E+05    1356.2          4.56       0.65
        2.59   428.43    .627E+05    1638.9          4.66       0.64
        2.77   428.61    .737E+05    1955.8          4.73       0.63
        2.95   428.79    .859E+05    2310.2          4.79       0.62
        3.13   428.97    .996E+05    2701.5          4.84       0.61

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
    INFLOW : ID= 2 (******)   53.26     0.30    1.67   9.66      0.01      0.88
    OUTFLOW: ID= 1 (******)   53.26     0.30    1.67   9.66      0.01      0.88



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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.013 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.352
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  11.13   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.42

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
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30601>
30602>      Unit Hyd Qpeak  (cms)=   1.012
30603>
30604>      PEAK FLOW       (cms)=   0.172 (i)
30605>      TIME TO PEAK    (hrs)=   1.250
30606>      RUNOFF VOLUME    (mm)=   5.364
30607>      TOTAL RAINFALL   (mm)=  22.900
30608>      RUNOFF COEFFICIENT   =   0.234
30609>
30610>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
30611>
30612> ------------------------------------------------------------------------------
30613> --------------------
30614> | CALIB            |
30615> | NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
30616> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
30617> --------------------   U.H. Tp(hrs)=   0.22
30618>
30619>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
30620>
30621>
30622>                              ---- TRANSFORMED HYETOGRAPH ----
30623>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
30624>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
30625>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
30626>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
30627>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
30628>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
30629>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
30630>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
30631>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
30632>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
30633>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
30634>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
30635>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
30636>
30637>      Unit Hyd Qpeak  (cms)=   0.130
30638>
30639>      PEAK FLOW       (cms)=   0.020 (i)
30640>      TIME TO PEAK    (hrs)=   1.083
30641>      RUNOFF VOLUME    (mm)=   5.357
30642>      TOTAL RAINFALL   (mm)=  22.900
30643>      RUNOFF COEFFICIENT   =   0.234
30644>
30645>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
30646>
30647> ------------------------------------------------------------------------------
30648> --------------------
30649> | CALIB            |
30650> | STANDHYD ( 40600)|   Area     (ha)=  78.37
30651> |ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
30652> --------------------
30653>                                IMPERVIOUS    PERVIOUS (i)
30654>      Surface Area     (ha)=      54.14        24.23
30655>      Dep. Storage     (mm)=       2.00         5.78
30656>      Average Slope     (%)=       1.20         1.20
30657>      Length            (m)=     722.82        47.00
30658>      Mannings n           =      0.015        0.260
30659>
30660>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
30661>
30662>
30663>                              ---- TRANSFORMED HYETOGRAPH ----
30664>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
30665>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
30666>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
30667>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
30668>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
30669>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
30670>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
30671>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
30672>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
30673>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
30674>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
30675>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
30676>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
30677>
30678>      Max.Eff.Inten.(mm/hr)=      41.60        17.74
30679>                   over (min)       10.00        35.00
30680>      Storage Coeff.  (min)=      12.26 (ii)   30.79 (ii)
30681>      Unit Hyd. Tpeak (min)=      10.00        35.00
30682>      Unit Hyd. peak  (cms)=       0.10         0.04
30683>                                                    *TOTALS*
30684>      PEAK FLOW       (cms)=       4.36         0.47          4.527 (iii)
30685>      TIME TO PEAK    (hrs)=       1.00         1.42           1.00
30686>      RUNOFF VOLUME    (mm)=      20.90         5.33          14.09
30687>      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
30688>      RUNOFF COEFFICIENT   =       0.91         0.23           0.62
30689>
30690>
30691>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
30692>             CN*  =  79.0    Ia = Dep. Storage  (Above)
30693>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
30694>            THAN THE STORAGE COEFFICIENT.
30695>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
30696>
30697> ------------------------------------------------------------------------------
30698> --------------------
30699> | ROUTE CHN( 60600)|
30700> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
30701> --------------------
30702>                <------ DATA FOR SECTION (   1.1) ------>
30703>                Distance      Elevation       Manning
30704>                    0.00         144.07        0.0450
30705>                    9.00         143.84        0.0450
30706>                   12.00         142.90        0.0450
30707>                   15.00         142.48        0.0450
30708>                   18.00         142.43    0.0450 /0.0350  Main Channel
30709>                   21.00         142.31        0.0350      Main Channel
30710>                   24.00         142.12        0.0350      Main Channel
30711>                   27.00         142.44    0.0350 /0.0450  Main Channel
30712>                   30.00         142.71        0.0450
30713>                   33.00         143.18        0.0450
30714>                   36.00         143.27        0.0450
30715>                   37.00         143.36        0.0450
30716>                   38.00         143.64        0.0450
30717>                   39.00         143.92        0.0450
30718>                   40.00         143.93        0.0450
30719>                   45.00         144.18        0.0450
30720>
30721>       <---------------------- TRAVEL TIME TABLE ----------------------->
30722>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
30723>          (m)      (m)     (cu.m.)       (cms)       (m/s)       (min)
30724>         0.08   142.20    .282E+02         0.0        0.24       26.26
30725>         0.16   142.27    .113E+03         0.1        0.38       16.54
30726>         0.23   142.35    .257E+03         0.3        0.48       13.09
30727>         0.31   142.43    .477E+03         0.7        0.57       11.02
30728>         0.42   142.54    .969E+03         2.0        0.76        8.24
30729>         0.53   142.65    .157E+04         3.8        0.92        6.80
30730>         0.64   142.76    .224E+04         6.3        1.06        5.90
30731>         0.75   142.87    .299E+04         9.5        1.19        5.26
30732>         0.86   142.98    .379E+04        13.2        1.31        4.77
30733>         0.97   143.09    .463E+04        17.6        1.43        4.37
30734>         1.08   143.20    .552E+04        22.5        1.53        4.09
30735>         1.19   143.31    .653E+04        27.9        1.60        3.90
30736>         1.30   143.42    .761E+04        34.4        1.70        3.69
30737>         1.41   143.53    .874E+04        41.7        1.79        3.49
30738>         1.52   143.64    .989E+04        49.7        1.89        3.32
30739>         1.63   143.75    .111E+05        58.3        1.98        3.17
30740>         1.74   143.85    .123E+05        66.9        2.04        3.06
30741>         1.85   143.96    .137E+05        73.2        2.01        3.11
30742>         1.96   144.07    .153E+05        81.5        2.00        3.13
30743>
30744>                                    <---- hydrograph ---->   <-pipe / channel->
30745>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
30746>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
30747>    INFLOW : ID= 2 ( 40600)   78.37     4.53    1.00  14.09      0.56      0.95
30748>    OUTFLOW: ID= 1 ( 60600)   78.37     4.22    1.08  14.09      0.55      0.94
30749>
30750>
30751>
30752> ------------------------------------------------------------------------------
30753> --------------------
30754> | CALIB            |
30755> | STANDHYD ( 40610)|   Area     (ha)=   3.94
30756> |ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
30757> --------------------
30758>                                IMPERVIOUS    PERVIOUS (i)
30759>      Surface Area     (ha)=       1.75         2.18
30760>      Dep. Storage     (mm)=       2.00         8.00
30761>      Average Slope     (%)=       2.90         2.90
30762>      Length            (m)=     162.03        40.00
30763>      Mannings n           =      0.015        0.340
30764>
30765>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
30766>
30767>
30768>                              ---- TRANSFORMED HYETOGRAPH ----
30769>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
30770>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
30771>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
30772>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
30773>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
30774>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
30775>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
30776>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
30777>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
30778>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
30779>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
30780>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
30781>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
30782>
30783>      Max.Eff.Inten.(mm/hr)=      41.60         9.91
30784>                   over (min)        5.00        25.00
30785>      Storage Coeff.  (min)=       3.84 (ii)   22.98 (ii)
30786>      Unit Hyd. Tpeak (min)=       5.00        25.00
30787>      Unit Hyd. peak  (cms)=       0.25         0.05
30788>                                                    *TOTALS*
30789>      PEAK FLOW       (cms)=       0.14         0.03          0.157 (iii)
30790>      TIME TO PEAK    (hrs)=       1.00         1.25           1.00
30791>      RUNOFF VOLUME    (mm)=      20.90         3.43           8.95
30792>      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
30793>      RUNOFF COEFFICIENT   =       0.91         0.15           0.39
30794>
30795> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
30796>
30797>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
30798>             CN*  =  76.9    Ia = Dep. Storage  (Above)
30799>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
30800>            THAN THE STORAGE COEFFICIENT.
30801>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
30802>
30803> ------------------------------------------------------------------------------
30804>
30805> --------------------
30806> | ADD HYD  ( 50600)|
30807> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
30808> --------------------          (ha)    (cms)    (hrs)     (mm)
30809>         ID1= 1 ( 40610):     3.94    0.157     1.00     8.95
30810>       + ID2= 2 ( 60600):    78.37    4.215     1.08    14.09
30811>         ==========================================================
30812>         ID = 3 ( 50600):    82.31    4.281     1.08    13.84
30813>
30814>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
30815> ------------------------------------------------------------------------------
30816> --------------------
30817> | ROUTE CHN( 60610)|
30818> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
30819> --------------------
30820>                <------ DATA FOR SECTION (   1.1) ------>
30821>                Distance      Elevation       Manning
30822>                    0.00         143.40        0.0450
30823>                    2.00         142.92        0.0450
30824>                    4.00         142.14        0.0450
30825>                    6.00         141.49        0.0450
30826>                    8.00         141.11        0.0450
30827>                   10.00         141.00    0.0450 /0.0350  Main Channel
30828>                   12.00         140.98        0.0350      Main Channel
30829>                   14.00         140.82        0.0350      Main Channel
30830>                   16.00         141.02    0.0350 /0.0450  Main Channel
30831>                   18.00         141.19        0.0450
30832>                   20.00         141.19        0.0450
30833>                   22.00         141.44        0.0450
30834>                   24.00         142.00        0.0450
30835>                   26.00         142.20        0.0450
30836>                   28.00         142.39        0.0450
30837>                   30.00         142.96        0.0450
30838>                   31.00         143.13        0.0450
30839>                   32.00         143.28        0.0450
30840>                   33.00         143.41        0.0450
30841>                   34.00         143.44        0.0450
30842>
30843>       <---------------------- TRAVEL TIME TABLE ----------------------->
30844>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
30845>          (m)      (m)     (cu.m.)       (cms)       (m/s)       (min)
30846>         0.09   140.91    .314E+02         0.0        0.24       23.12
30847>         0.18   141.00    .132E+03         0.1        0.31       17.83
30848>         0.33   141.14    .502E+03         0.9        0.58        9.54
30849>         0.47   141.29    .107E+04         2.4        0.74        7.47
30850>         0.61   141.43    .175E+04         4.7        0.89        6.20
30851>         0.75   141.57    .251E+04         7.9        1.05        5.31
30852>         0.89   141.71    .332E+04        11.8        1.19        4.68
30853>         1.03   141.85    .416E+04        16.5        1.32        4.21
30854>         1.17   141.99    .506E+04        21.8        1.44        3.86
30855>         1.31   142.13    .601E+04        27.5        1.52        3.64
30856>         1.45   142.27    .705E+04        34.0        1.61        3.46
30857>         1.59   142.41    .818E+04        41.5        1.69        3.29
30858>         1.73   142.55    .936E+04        50.2        1.79        3.11
30859>         1.88   142.69    .106E+05        59.8        1.88        2.95
30860>         2.02   142.84    .118E+05        70.2        1.97        2.81
30861>         2.16   142.98    .132E+05        81.2        2.06        2.70
30862>         2.30   143.12    .145E+05        92.6        2.12        2.61
30863>         2.44   143.26    .159E+05       104.8        2.19        2.54
30864>         2.58   143.40    .174E+05       117.7        2.24        2.47
30865>
30866>                                    <---- hydrograph ---->   <-pipe / channel->
30867>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
30868>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
30869>    INFLOW : ID= 2 ( 50600)   82.31     4.28    1.08  13.84      0.58      0.86
30870>    OUTFLOW: ID= 1 ( 60610)   82.31     3.95    1.17  13.84      0.56      0.84
30871>
30872>
30873>
30874> ------------------------------------------------------------------------------
30875> --------------------
30876> | CALIB            |
30877> | STANDHYD ( 40620)|   Area     (ha)=   5.67
30878> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
30879> --------------------
30880>                                IMPERVIOUS    PERVIOUS (i)
30881>      Surface Area     (ha)=       4.30         1.37
30882>      Dep. Storage     (mm)=       2.00         5.59
30883>      Average Slope     (%)=       1.50         1.50
30884>      Length            (m)=     194.41        43.00
30885>      Mannings n           =      0.015        0.270
30886>
30887>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
30888>
30889>
30890>                              ---- TRANSFORMED HYETOGRAPH ----
30891>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
30892>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
30893>                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
30894>                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
30895>                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
30896>                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
30897>                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
30898>                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
30899>                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
30900>                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
30901>                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
30902>                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
30903>                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
30904>
30905>      Max.Eff.Inten.(mm/hr)=      41.60        26.85
30906>                   over (min)        5.00        20.00
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```
      Storage Coeff.  (min)=       5.22 (ii)   19.45 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.21         0.06
                                                      *TOTALS*
      PEAK FLOW       (cms)=       0.39         0.05          0.431 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.17          1.00
      RUNOFF VOLUME    (mm)=      20.90         6.21         15.12
      TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
      RUNOFF COEFFICIENT   =       0.91         0.27          0.66

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40620):     5.67   0.431     1.00    15.12
      + ID2= 2 ( 60610):    82.31   3.948     1.17    13.84
        ================================================
        ID = 3 ( 50610):    87.98   4.079     1.17    13.92

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         142.03        0.0450
                    1.00         141.71        0.0450
                    2.00         141.35        0.0450
                    3.00         141.01        0.0450
                    4.00         140.79        0.0450
                    5.00         140.56        0.0450
                    6.00         140.44        0.0450
                    7.00         140.30    0.0450 /0.0350  Main Channel
                    8.00         140.08        0.0350      Main Channel
                    9.00         139.88        0.0350      Main Channel
                   10.00         139.97        0.0350      Main Channel
                   11.00         140.12        0.0350      Main Channel
                   12.00         140.35    0.0350 /0.0450  Main Channel
                   13.00         140.52        0.0450
                   14.00         140.73        0.0450
                   15.00         140.97        0.0450
                   16.00         141.27        0.0450
                   17.00         141.57        0.0450
                   18.00         141.89        0.0450
                   19.00         142.07        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02        0.0         0.36       8.21
        0.21   140.09    .579E+02        0.2         0.59       5.04
        0.31   140.19    .120E+03        0.5         0.78       3.79
        0.42   140.30    .200E+03        1.1         0.95       3.12
        0.53   140.41    .313E+03        2.1         1.18       2.51
        0.65   140.53    .456E+03        3.5         1.36       2.18
        0.76   140.65    .630E+03        5.3         1.50       1.98
        0.88   140.76    .826E+03        7.6         1.63       1.82
        0.99   140.88    .104E+04       10.3         1.75       1.69
        1.11   140.99    .128E+04       13.4         1.87       1.59
        1.23   141.11    .154E+04       17.1         1.98       1.50
        1.34   141.22    .180E+04       21.2         2.09       1.42
        1.46   141.34    .209E+04       25.8         2.20       1.35
        1.57   141.45    .239E+04       30.9         2.30       1.29
        1.69   141.57    .270E+04       36.4         2.40       1.24
        1.80   141.69    .303E+04       42.4         2.49       1.19
        1.92   141.80    .337E+04       48.9         2.58       1.15
        2.04   141.92    .373E+04       55.9         2.67       1.11
        2.15   142.03    .411E+04       63.2         2.74       1.08

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98    4.08    1.17  13.92      0.68      1.40
   OUTFLOW: ID= 1 ( 60620)   87.98    4.11    1.17  13.92      0.69      1.41


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| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         7.01
                   over (min)        5.00        35.00
     Storage Coeff.  (min)=       3.75 (ii)   30.94 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.25         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.01          0.082 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.42          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.57          9.04
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.16          0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40640):     2.13   0.082     1.00     9.04
      + ID2= 2 ( 60620):    87.98   4.105     1.17    13.92
        ================================================
        ID = 3 ( 50630):    90.11   4.123     1.17    13.81

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
              0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
              0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
              0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
              0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
              0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
              0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
              0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
              0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
              0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
              0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        15.31
                   over (min)       10.00        30.00
     Storage Coeff.  (min)=       7.84 (ii)   25.78 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.13         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.19         0.14          1.245 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.33          1.00
     RUNOFF VOLUME    (mm)=      20.90         4.94         13.34
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.22          0.58

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40630):    20.54   1.245     1.00    13.34
      + ID2= 2 ( 50630):    90.11   4.123     1.17    13.81
        ================================================
        ID = 3 ( 50640):   110.65   5.080     1.08    13.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000  |    3.4010      4.4390
                          0.0530      0.4910  |    4.8380      5.5060
                          0.0890      0.7040  |    5.8470      5.5380
                          0.2040      1.0890  |    6.5980      5.9190
                          0.3240      1.4800  |    7.2560      6.2250
                          0.3890      1.7490  |    7.9030      6.4820
                          0.4470      1.9970  |    8.4910      6.6820
                          0.5090      2.3490  |   12.0680      7.1150
                          0.7420      2.9150  |   20.0000      7.2000
                          1.7580      3.6690  |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50640)    110.646      5.080      1.08      13.72
   OUTFLOW: ID= 1 (******)    110.646      0.265      3.00      13.70
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.22
                  TIME SHIFT OF PEAK FLOW          (min)=115.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.2887

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  --------------------------
  | Junction Command(30651005) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651001)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2(30651005)    0.00      0.00    0.00      0.00

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):   110.65   0.265     3.00    13.70
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):   110.65   0.265     3.00    13.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):   110.65   0.265     3.00    13.70
      + ID2= 2 (******):     0.75   0.020     1.08     5.36
        ================================================
        ID = 1 (******):   111.40   0.266     3.00    13.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   0.172     1.25     5.36
      + ID2= 2 (******):   111.40   0.266     3.00    13.64
        ================================================
        ID = 3 (******):   122.53   0.336     1.58    12.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         447.10        0.0450
                   42.83         446.80        0.0450
                   42.89         446.80        0.0450
                   43.24         446.79        0.0450
                  122.57         446.48        0.0450
                  154.02         446.22        0.0450
```

```
                191.79        446.32    0.0450 /0.0350  Main Channel
                199.05        442.27        0.0350      Main Channel
                199.74        442.33        0.0350      Main Channel
                212.02        444.19        0.0350      Main Channel
                232.17        444.54    0.0350 /0.0450  Main Channel
                348.58        444.42        0.0450
                359.23        444.30        0.0450
                381.33        444.03        0.0450
                483.65        444.18        0.0450
                548.64        445.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.19   442.46    .184E+03        0.1         0.65      24.29
        0.38   442.65    .662E+03        0.7         1.01      15.64
        0.57   442.84    .143E+04        2.0         1.31      12.09
        0.76   443.03    .247E+04        4.1         1.57      10.05
        0.95   443.22    .381E+04        7.3         1.81       8.70
        1.14   443.41    .543E+04       11.7         2.04       7.73
        1.33   443.60    .733E+04       17.5         2.26       6.99
        1.52   443.79    .952E+04       24.8         2.46       6.41
        1.71   443.98    .120E+05       33.7         2.66       5.93
        1.89   444.16    .211E+05       47.0         2.11       7.49
        2.08   444.35    .469E+05       73.0         1.47      10.71
        2.27   444.54    .855E+05      117.6         1.30      12.12
        2.46   444.73    .140E+06      240.0         1.62       9.75
        2.65   444.92    .197E+06      400.4         1.92       8.20
        2.84   445.11    .255E+06      595.0         2.21       7.13
        3.03   445.30    .314E+06      821.8         2.48       6.37
        3.22   445.49    .374E+06     1079.2         2.73       5.78
        3.41   445.68    .436E+06     1366.3         2.96       5.32
        3.60   445.87    .500E+06     1682.3         3.19       4.95

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  122.53     0.34    1.58  12.89      0.26      0.75
   OUTFLOW: ID= 1 (******)  122.53     0.30    2.00  12.89      0.24      0.72


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.174

      PEAK FLOW       (cms)=   0.026 (i)
      TIME TO PEAK    (hrs)=   1.083
      RUNOFF VOLUME    (mm)=   5.358
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.10   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Unit Hyd Qpeak  (cms)=   0.175

      PEAK FLOW       (cms)=   0.027 (i)
      TIME TO PEAK    (hrs)=   1.083
      RUNOFF VOLUME    (mm)=   5.359
      TOTAL RAINFALL   (mm)=  22.900
      RUNOFF COEFFICIENT   =   0.234

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.99
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
--------------------

                             IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.50          1.50
      Dep. Storage     (mm)=       2.00          4.13
      Average Slope     (%)=       1.00         20.00
      Length            (m)=      15.00         15.00
      Mannings n           =      0.013         0.025

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60        54.60
                   over (min)        5.00         5.00
      Storage Coeff.  (min)=       1.16 (ii)    4.51 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.23
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.00         0.22          0.228 (iii)
      TIME TO PEAK    (hrs)=       0.83         1.00           1.00
      RUNOFF VOLUME    (mm)=      20.90        10.39          10.49
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.45           0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (******)|   Area     (ha)=  17.55
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------

                             IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      14.39          3.16
      Dep. Storage     (mm)=       2.00          4.13
      Average Slope     (%)=       1.00          2.00
      Length            (m)=      30.00         30.00
      Mannings n           =      0.013         0.025

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
    0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
    0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
    0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
    0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
    0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
    0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
    0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
    0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
    0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
    0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60       109.60
                   over (min)        5.00         5.00
      Storage Coeff.  (min)=       1.76 (ii)    3.29 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.32         0.27
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.83         0.97          1.803 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.00           1.00
      RUNOFF VOLUME    (mm)=      20.90        13.67          16.63
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.60           0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.05    0.026     1.08     5.36
      + ID2= 2 (******):     1.10    0.027     1.08     5.36
        ================================================
        ID = 3 (******):     2.15    0.053     1.08     5.36

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.15    0.053     1.08     5.36
      + ID2= 2 (******):    17.55    1.803     1.00    16.63
        ================================================
        ID = 1 (******):    19.70    1.849     1.00    15.40

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    19.70    1.849     1.00    15.40
      + ID2= 2 (******):     2.99    0.228     1.00    10.49
        ================================================
        ID = 3 (******):    22.69    2.077     1.00    14.76

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    22.69    2.077     1.00    14.76
      + ID2= 2 (******):     0.00    0.000     1.00    14.94
        ================================================
        ID = 1 (******):    22.69    2.077     1.00    14.76

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    22.69    2.077     1.00    14.76
      + ID2= 2 (******):     0.00    0.000     1.00    16.63
        ================================================
        ID = 3 (******):    22.69    2.077     1.00    14.76

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.3352      3.1110
                           0.0933      0.5687   |    0.3714      3.8158
                           0.1848      1.1636   |    0.4043      4.5492
                           0.2439      1.7854   |    0.4445      5.5626
                           0.2910      2.4344   |    0.0000      0.0000

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)      22.691     2.077      1.00      14.76
   OUTFLOW: ID= 1 (******)      22.691     0.050      1.58      14.69
   OVERFLOW:ID= 3 (  0003)       0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.41
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.3060

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  --------------------------
  | Junction Command(30651004) |
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   --------------------------

                            AREA     QPEAK   TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
   INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
   OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00

   ------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    22.69   0.050     1.58    14.69
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    22.69   0.050     1.58    14.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    22.69   0.050     1.58    14.69
      + ID2= 2 (******):     0.45   0.013     1.08     5.35
        ================================================
        ID = 1 (******):    23.14   0.058     1.08    14.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    23.14   0.058     1.08    14.51
      + ID2= 2 (******):   122.53   0.298     2.00    12.89
        ================================================
        ID = 3 (******):   145.67   0.347     2.00    13.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.19   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.048 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.362
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 2 (******):     2.19   0.048     1.17     5.36
      + ID2= 2 (******):   145.67   0.347     2.00    13.15
        ================================================
        ID = 3 (******):   147.86   0.350     1.92    13.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         429.12        0.0450
                 37.54         428.86        0.0450
                 53.31         428.70        0.0450
                 81.17         428.24        0.0450
                 99.28         428.15    0.0450 /0.0350  Main Channel
                114.53         427.72        0.0350      Main Channel
                119.88         426.51        0.0350      Main Channel
                124.17         425.84        0.0350      Main Channel
                206.01         425.90        0.0350      Main Channel
                209.64         426.51        0.0350      Main Channel
                214.21         426.89        0.0350      Main Channel
                231.49         427.17        0.0350      Main Channel
                268.61         427.89    0.0350 /0.0450  Main Channel
                351.58         428.15        0.0450
                368.27         428.31        0.0450
                405.75         428.52        0.0450
                416.79         428.59        0.0450
                440.06         428.76        0.0450
                469.88         428.97        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   426.00    .218E+04       4.1         0.39       8.87
        0.31   426.16    .495E+04      15.8         0.67       5.22
        0.47   426.32    .779E+04      33.2         0.89       3.92
        0.63   426.47    .107E+05      55.4         1.08       3.22
        0.79   426.63    .137E+05      81.8         1.25       2.78
        0.94   426.79    .167E+05     112.4         1.40       2.48
        1.10   426.95    .199E+05     144.6         1.52       2.29
        1.26   427.10    .233E+05     176.4         1.58       2.20
        1.42   427.26    .271E+05     214.5         1.65       2.11
        1.57   427.42    .312E+05     258.4         1.73       2.01
        1.73   427.58    .356E+05     307.7         1.81       1.93
        1.89   427.73    .402E+05     362.0         1.88       1.85
        2.05   427.89    .452E+05     415.1         1.91       1.82
        2.23   428.07    .525E+05     501.3         1.99       1.74
        2.41   428.25    .621E+05     609.1         2.05       1.70
        2.59   428.43    .733E+05     739.1         2.10       1.65
        2.77   428.61    .862E+05     886.8         2.15       1.62
        2.95   428.79    .101E+06    1053.9         2.19       1.59
        3.13   428.97    .116E+06    1240.2         2.22       1.57

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  147.86     0.35     1.92   13.03      0.01      0.39
   OUTFLOW: ID= 1 (******)  147.86     0.35     2.17   13.03      0.01      0.39


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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):   147.86   0.346     2.17    13.03
      + ID2= 2 (******):    53.26   0.299     1.67     9.66
        ================================================
        ID = 3 (******):   201.12   0.620     1.83    12.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.007 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.340
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.233

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):     0.22   0.007     1.00     5.34
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):     0.22   0.007     1.00     5.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         433.07        0.0450
                 59.66         432.39        0.0450
                 94.25         432.03        0.0450
                115.71         431.82        0.0450
                143.84         431.84    0.0450 /0.0350  Main Channel
                163.59         431.75        0.0350      Main Channel
                177.84         431.73        0.0350      Main Channel
                199.51         431.70        0.0350      Main Channel
                231.74         431.53        0.0350      Main Channel
                283.71         431.44        0.0350      Main Channel
                294.09         431.43        0.0350      Main Channel
                325.65         431.42        0.0350      Main Channel
                355.24         431.24        0.0350      Main Channel
                383.70         431.43        0.0350      Main Channel
                476.17         432.06    0.0350 /0.0450  Main Channel
                510.88         432.23        0.0450
                558.61         432.37        0.0450
                589.84         432.57        0.0450
                622.97         432.73        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   431.32    .108E+03       0.3         0.30       6.68
        0.15   431.39    .434E+03       1.7         0.47       4.21
        0.23   431.47    .119E+04       5.0         0.50       3.99
        0.30   431.54    .252E+04      13.9         0.66       3.02
        0.38   431.62    .417E+04      29.3         0.84       2.37
        0.45   431.69    .604E+04      50.1         0.99       2.01
        0.53   431.77    .828E+04      73.9         1.06       1.87
        0.60   431.84    .109E+05     108.8         1.19       1.67
        0.68   431.92    .142E+05     159.5         1.34       1.48
        0.76   432.01    .176E+05     219.4         1.48       1.34
        0.84   432.09    .213E+05     290.0         1.62       1.22
        0.92   432.17    .252E+05     374.6         1.77       1.12
        1.01   432.25    .293E+05     469.2         1.91       1.04
        1.09   432.33    .338E+05     573.9         2.02       0.98
        1.17   432.41    .386E+05     689.9         2.13       0.93
        1.25   432.49    .435E+05     817.2         2.24       0.89
        1.33   432.57    .487E+05     955.3         2.34       0.85
        1.41   432.65    .541E+05    1103.5         2.43       0.82
        1.49   432.73    .597E+05    1262.7         2.52       0.79

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     0.22     0.01     1.00     5.34      0.00      0.30
   OUTFLOW: ID= 1 (******)     0.22     0.01     1.17     5.33      0.00      0.30


------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.014 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.340
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.233

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.073 (i)
     TIME TO PEAK    (hrs)=   1.167
     RUNOFF VOLUME    (mm)=   5.363
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.073     1.17     5.36
      + ID2= 2 (******):     0.45   0.014     1.00     5.34
        ================================================
        ID = 3 (******):     4.32   0.083     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.083     1.17     5.36
      + ID2= 2 (******):     0.22   0.006     1.17     5.33
        ================================================
        ID = 1 (******):     4.54   0.089     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         430.79        0.0450
                  23.82         429.79    0.0450 /0.0350  Main Channel
                  44.05         429.11        0.0350      Main Channel
                  70.46         428.15        0.0350      Main Channel
                 112.31         427.60        0.0350      Main Channel
                 150.77         427.27        0.0350      Main Channel
                 179.17         427.15        0.0350      Main Channel
                 214.90         427.16        0.0350      Main Channel
                 261.89         427.25        0.0350      Main Channel
                 317.65         427.56        0.0350      Main Channel
                 382.75         427.99        0.0350      Main Channel
                 394.40         428.11        0.0350      Main Channel
                 432.80         428.07        0.0350      Main Channel
                 432.91         428.07        0.0350      Main Channel
                 462.57         428.15        0.0350      Main Channel
                 522.90         429.79    0.0350 /0.0450  Main Channel
                 585.04         429.90        0.0450
                 731.92         430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)    (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04       11.5         0.73       2.99
        0.35   427.50    .570E+04       49.9         1.15       1.91
        0.53   427.68    .105E+05      119.2         1.49       1.47
        0.70   427.85    .163E+05      221.8         1.79       1.22
        0.88   428.03    .229E+05      360.8         2.06       1.06
        1.06   428.21    .312E+05      509.7         2.14       1.02
        1.23   428.38    .405E+05      771.0         2.49       0.88
        1.41   428.56    .500E+05     1076.3         2.82       0.77
        1.58   428.73    .598E+05     1423.8         3.12       0.70
        1.76   428.91    .699E+05     1812.5         3.40       0.64
        1.94   429.09    .802E+05     2241.5         3.66       0.60
        2.11   429.26    .907E+05     2709.1         3.91       0.56
        2.29   429.44    .102E+06     3215.8         4.15       0.53
        2.46   429.61    .113E+06     3761.6         4.38       0.50
        2.64   429.79    .124E+06     4346.4         4.59       0.48
        2.85   430.00    .139E+06     5173.9         4.88       0.45
        3.06   430.20    .156E+06     6075.9         5.12       0.43
        3.26   430.41    .173E+06     7054.9         5.33       0.41
        3.47   430.62    .193E+06     8114.3         5.52       0.40

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)     4.54     0.09    1.17   5.36      0.00      0.73
   OUTFLOW: ID= 1 (******)     4.54     0.09    1.17   5.36      0.00      0.73

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.024 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.358
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.020 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.349
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.020     1.08     5.35
      + ID2= 2 (******):     0.97   0.024     1.08     5.36
        ================================================
        ID = 3 (******):     1.66   0.044     1.08     5.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.044     1.08     5.35
      + ID2= 2 (******):     4.54   0.086     1.17     5.36
        ================================================
        ID = 3 (******):     6.20   0.125     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                                AREA     QPEAK     TPEAK     R.V.
                                (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):        6.20      0.12      1.17     5.36
     ================================================================
     ID= 2  (   2)    :        6.20      0.12      1.17     5.36
     ID= 3  (   2)    :        0.00      0.00      1.17     5.36
     ID= 4  (   2)    :        0.00      0.00      0.00     0.00
     ID= 5  (   2)    :        0.00      0.00      0.00     0.00
     ID= 6  (   2)    :        0.00      0.00      0.00     0.00

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--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=        0.96          0.25
     Dep. Storage      (mm)=        2.00          4.48
     Average Slope      (%)=        0.64          0.54
     Length             (m)=       63.89        157.20
     Mannings n            =       0.013         0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         14.66
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       3.17 (ii)    17.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.27          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11          0.01          0.114 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.17          1.00
     RUNOFF VOLUME    (mm)=      20.90          5.36         17.63
     TOTAL RAINFALL   (mm)=      22.90         22.90         22.90
     RUNOFF COEFFICIENT   =       0.91          0.23          0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=        2.32          0.58
     Dep. Storage      (mm)=        2.00          4.48
     Average Slope      (%)=        0.70          0.60
     Length             (m)=      166.18        124.91
     Mannings n            =       0.013         0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
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                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         16.38
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.48 (ii)    10.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.20          0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.27          0.02          0.280 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.08           1.00
     RUNOFF VOLUME    (mm)=      20.90          5.36          17.79
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.23           0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     2.90    0.280     1.00    17.79
     + ID2= 2 (******):     1.21    0.114     1.00    17.63
       ================================================
       ID = 3 (******):     4.11    0.394     1.00    17.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.85     0.00     0.00     0.00     0.00     0.85
       0.85     1.00     0.00     0.00     0.00     1.85
       0.85   100.00     0.00     0.00     0.00   100.85

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   4.11      0.39      1.00   17.74
     ================================================
     ID= 2  (   2)    :   4.11      0.39      1.00   17.74
     ID= 3  (   2)    :   0.00      0.00      1.00   17.74
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.00    0.000     1.17     5.36
     + ID2= 2 (******):     4.11    0.394     1.00    17.74
       ================================================
       ID = 3 (******):     4.11    0.394     1.00    17.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.00     5.20     0.00     0.00     0.00     5.20
       1.00     5.20     0.00     0.00     0.00     6.20
     100.00     5.20     0.00     0.00     0.00   105.20

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   4.11      0.39      1.00   17.74
     ================================================
     ID= 2  (   2)    :   0.00      0.00      1.00   17.74
     ID= 3  (   2)    :   4.11      0.39      1.00   17.74
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     6.20    0.125     1.17     5.36
     + ID2= 2 (******):     0.00    0.000     1.00    17.74
       ================================================
       ID = 3 (******):     6.20    0.125     1.17     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       1.00     0.00     0.00     0.00     0.00     1.00
     100.00     0.00     0.00     0.00     0.00   100.00

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   6.20      0.12      1.17    5.36
     ================================================
     ID= 2  (   2)    :   6.20      0.12      1.17    5.36
     ID= 3  (   2)    :   0.00      0.00      1.17    5.36
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.00     0.00     0.00     0.00     0.00     0.00
       0.01     0.00     0.00     0.00     0.00     0.01
       0.06     0.00     0.00     0.00     0.00     0.06
       0.08     0.00     0.00     0.00     0.00     0.08
       0.12     0.00     0.00     0.00     0.00     0.12
       0.20     0.00     0.00     0.00     0.00     0.20
       0.25     0.00     0.00     0.00     0.00     0.25
       0.30     0.00     0.00     0.00     0.00     0.30
       0.33     0.00     0.00     0.00     0.00     0.33
       0.37     0.00     0.00     0.00     0.00     0.37
       0.39     0.00     0.00     0.00     0.00     0.39
       0.42     1.43     0.00     0.00     0.00     1.85
       0.44     8.83     0.00     0.00     0.00     9.27
       0.47    25.03     0.00     0.00     0.00    25.50
       0.49    52.11     0.00     0.00     0.00    52.61
       0.52    91.81     0.00     0.00     0.00    92.33
       0.53   126.04     0.00     0.00     0.00   126.57

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   6.20      0.12      1.17    5.36
     ================================================
     ID= 2  (   2)    :   6.19      0.12      1.17    5.36
     ID= 3  (   2)    :   0.01      0.00      1.17    5.36
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.81          0.01
     Dep. Storage     (mm)=        2.00          4.48
     Average Slope     (%)=        0.50          1.00
     Length            (m)=       18.40          0.10
     Mannings n           =       0.013         0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
     0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
     0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
     0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
     0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
     0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
     0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
     0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
     0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
     0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
     0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         16.38
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.62 (ii)     1.63 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.32          0.32
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.00          0.094 (iii)
     TIME TO PEAK    (hrs)=       1.00          1.00           1.00
     RUNOFF VOLUME    (mm)=      20.90          5.36          20.74
     TOTAL RAINFALL   (mm)=      22.90         22.90          22.90
     RUNOFF COEFFICIENT   =       0.91          0.23           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.82    0.094     1.00    20.74
     + ID2= 2 (******):     0.00    0.000     1.17     5.36
       ================================================
       ID = 3 (******):     0.82    0.094     1.00    20.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 3 (******):     0.82    0.094     1.00    20.74
     + ID2= 2 (******):     0.01    0.000     1.17     5.36
       ================================================
       ID = 1 (******):     0.83    0.094     1.00    20.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.00     0.00     0.00     0.00     0.00     0.00
       0.03     0.00     0.00     0.00     0.00     0.03
       0.04     0.00     0.00     0.00     0.00     0.04
       0.09     0.00     0.00     0.00     0.00     0.09
       0.12     0.00     0.00     0.00     0.00     0.13
       0.20     0.00     0.00     0.00     0.00     0.20
       0.30     0.00     0.00     0.00     0.00     0.30
       0.37     0.00     0.00     0.00     0.00     0.37
       0.43     0.00     0.00     0.00     0.00     0.43
       0.48     0.00     0.00     0.00     0.00     0.48
       0.52     0.00     0.00     0.00     0.00     0.52
       0.57     0.00     0.00     0.00     0.00     0.57
       0.67     0.00     0.00     0.00     0.00     0.67
       0.68     0.00     0.00     0.00     0.00     0.68
       0.68     0.02     0.00     0.00     0.00     0.70
       0.72     0.56     0.00     0.00     0.00     1.28
       0.73     0.75     0.01     0.00     0.00     1.48
       1.10     1.87     0.54     0.00     0.00     3.51
       1.40     2.25     2.61     0.00     0.00     6.26

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   0.83      0.09      1.00   20.64
     ================================================
     ID= 2  (   3)    :   0.82      0.09      1.00   20.64
     ID= 3  (   3)    :   0.00      0.00      1.00   20.64
     ID= 4  (   3)    :   0.00      0.00      1.00   20.64
     ID= 5  (   3)    :   0.00      0.00      0.00    0.00
     ID= 6  (   3)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     6.19    0.125     1.17     5.36
     + ID2= 2 (******):     0.82    0.094     1.00    20.64
       ================================================
       ID = 3 (******):     7.02    0.187     1.00     7.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        4.98          3.60
     Dep. Storage     (mm)=        2.00          4.48
     Average Slope     (%)=        0.91          1.12
     Length            (m)=      246.54        157.18
     Mannings n           =       0.015         0.300

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

```
                                  ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
         0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
         0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
         0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
         0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
         0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
         0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
         0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
         0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
         0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
         0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

Max.Eff.Inten.(mm/hr)=      41.60         4.97
              over (min)        5.00        80.00
Storage Coeff.  (min)=       6.99 (ii)   77.74 (ii)
Unit Hyd. Tpeak (min)=       5.00        80.00
Unit Hyd. peak  (cms)=       0.17         0.01
                                                  *TOTALS*
PEAK FLOW       (cms)=       0.56         0.02        0.566 (iii)
TIME TO PEAK    (hrs)=       1.00         2.17         1.00
RUNOFF VOLUME    (mm)=      20.90         5.36        14.37
TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
RUNOFF COEFFICIENT   =       0.91         0.23         0.63

  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  85.0    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
  ID1= 1 (******):     8.58   0.566     1.00    14.37
+ ID2= 2 (******):   201.12   0.620     1.83    12.14
  ====================================================
  ID = 3 ( 50650):   209.70   0.721     1.00    12.23

NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
  ID1= 3 ( 50650):   209.70   0.721     1.00    12.23
+ ID2= 2 (******):     7.02   0.187     1.00     7.15
  ====================================================
  ID = 1 ( 50650):   216.71   0.909     1.00    12.07

NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         129.45        0.0450
                   6.00         129.24        0.0450
                   8.00         128.92        0.0450
                  10.00         128.26        0.0450
                  12.00         127.37        0.0450
                  14.00         126.79        0.0450
                  16.00         126.20        0.0450
                  18.00         125.80        0.0450
                  21.00         125.29        0.0450
                  24.00         124.85        0.0450
                  27.00         124.54        0.0350      Main Channel
                  30.00         124.62        0.0350      Main Channel
                  33.00         124.84    0.0350 /0.0450  Main Channel
                  36.00         125.26        0.0450
                  39.00         125.86        0.0450
                  42.00         126.49        0.0450
                  48.00         128.97        0.0450
                  54.00         129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.26  124.80    .390E+03       0.9         0.76       7.18
        0.51  125.06    .124E+04       4.9         1.29       4.21
        0.77  125.31    .239E+04      12.3         1.67       3.25
        1.03  125.57    .380E+04      23.2         1.99       2.73
        1.28  125.83    .544E+04      37.9         2.27       2.40
        1.54  126.08    .731E+04      56.6         2.52       2.15
        1.80  126.34    .937E+04      79.6         2.77       1.96
        2.05  126.60    .116E+05     107.2         3.01       1.81
        2.31  126.85    .140E+05     139.3         3.25       1.67
        2.57  127.11    .165E+05     175.4         3.47       1.57
        2.82  127.37    .191E+05     215.7         3.68       1.48
        3.08  127.62    .219E+05     261.1         3.89       1.39
        3.34  127.88    .247E+05     310.7         4.10       1.32
        3.59  128.14    .276E+05     364.3         4.30       1.26
        3.85  128.40    .307E+05     421.6         4.48       1.21
        4.11  128.65    .338E+05     482.7         4.65       1.17
        4.36  128.91    .371E+05     548.1         4.82       1.13
        4.62  129.17    .406E+05     600.9         4.83       1.13
        4.88  129.42    .446E+05     634.1         4.63       1.17

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50650)  216.71     0.91    1.00  12.07      0.26      0.76
OUTFLOW: ID= 1 ( 60650)  216.71     0.76    1.08  12.07      0.22      0.76


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--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
Surface Area     (ha)=      37.06         13.71
Dep. Storage     (mm)=       2.00          6.10
Average Slope     (%)=       1.50          1.50
Length            (m)=     581.73         82.00
Mannings n           =      0.015         0.280

    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
         0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
         0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
         0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
         0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
         0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
         0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
         0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
         0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
         0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
         0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

Max.Eff.Inten.(mm/hr)=      41.60         4.45
              over (min)       10.00        55.00
Storage Coeff.  (min)=      10.07 (ii)   54.07 (ii)
Unit Hyd. Tpeak (min)=      10.00        55.00
Unit Hyd. peak  (cms)=       0.11         0.02
                                                  *TOTALS*
PEAK FLOW       (cms)=       3.82         0.08        3.834 (iii)
TIME TO PEAK    (hrs)=       1.00         1.75         1.00
RUNOFF VOLUME    (mm)=      20.90         3.61        16.06
TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
RUNOFF COEFFICIENT   =       0.91         0.16         0.70

  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  79.5    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
  ID1= 1 ( 40670):    50.76   3.834     1.00    16.06
+ ID2= 2 ( 60650):   216.71   0.762     1.08    12.07
  ====================================================
  ID = 3 ( 50670):   267.48   4.572     1.00    12.82

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         115.77        0.0450
                  20.00         115.51        0.0450
                  24.00         114.73        0.0450
                  28.00         113.17    0.0450 /0.0350  Main Channel
                  32.00         113.16    0.0350 /0.0450  Main Channel
                  36.00         114.68        0.0450
                  40.00         115.05        0.0450
                  44.00         115.27        0.0450
                  48.00         115.46        0.0450
                  52.00         115.71        0.0450
                  54.00         115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14  113.30    .275E+03       0.3         0.60      13.60
        0.27  113.43    .612E+03       1.2         0.93       8.76
        0.41  113.57    .996E+03       2.4         1.18       6.88
        0.55  113.71    .143E+04       4.1         1.39       5.85
        0.69  113.84    .191E+04       6.1         1.57       5.18
        0.82  113.98    .244E+04       8.6         1.73       4.70
        0.96  114.12    .301E+04      11.6         1.87       4.34
        1.10  114.26    .363E+04      14.9         2.00       4.06
        1.24  114.39    .430E+04      18.8         2.12       3.82
        1.37  114.53    .502E+04      23.1         2.24       3.63
        1.51  114.67    .579E+04      27.9         2.34       3.46
        1.65  114.81    .664E+04      32.5         2.38       3.41
        1.78  114.94    .763E+04      37.8         2.41       3.36
        1.92  115.08    .878E+04      44.0         2.44       3.33
        2.06  115.22    .101E+05      50.8         2.45       3.31
        2.20  115.35    .117E+05      58.8         2.46       3.30
        2.33  115.49    .134E+05      68.1         2.47       3.29
        2.47  115.63    .157E+05      74.2         2.30       3.53
        2.61  115.77    .188E+04      85.0         2.20       3.69

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50670)  267.48     4.57    1.00  12.82      0.58      1.43
OUTFLOW: ID= 1 ( 60670)  267.48     4.32    1.08  12.82      0.57      1.41


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--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                           IMPERVIOUS    PERVIOUS (i)
Surface Area     (ha)=       6.22          4.63
Dep. Storage     (mm)=       2.00          8.04
Average Slope     (%)=       2.30          2.30
Length            (m)=     269.03         47.00
Mannings n           =      0.015         0.350

    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
         0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
         0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
         0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
         0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
         0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
         0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
         0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
         0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
         0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
         0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

Max.Eff.Inten.(mm/hr)=      41.60         5.45
              over (min)        5.00        35.00
Storage Coeff.  (min)=       5.58 (ii)   34.80 (ii)
Unit Hyd. Tpeak (min)=       5.00        35.00
Unit Hyd. peak  (cms)=       0.20         0.03
                                                  *TOTALS*
PEAK FLOW       (cms)=       0.69         0.04        0.696 (iii)
TIME TO PEAK    (hrs)=       1.00         1.50         1.00
RUNOFF VOLUME    (mm)=      20.90         3.19        12.95
TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
RUNOFF COEFFICIENT   =       0.91         0.14         0.57

  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  80.7    Ia = Dep. Storage  (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
      THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
  ID1= 1 ( 40700):    10.86   0.696     1.00    12.95
+ ID2= 2 ( 60670):   267.48   4.316     1.08    12.82
  ====================================================
  ID = 3 ( 50680):   278.33   4.885     1.00    12.83

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                           IMPERVIOUS    PERVIOUS (i)
Surface Area     (ha)=       0.50          0.69
Dep. Storage     (mm)=       2.00          7.98
Average Slope     (%)=       0.60          0.60
Length            (m)=      89.27         69.00
Mannings n           =      0.015         0.350

    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         2.97
                   over (min)        5.00        75.00
     Storage Coeff.  (min)=       4.30 (ii)   74.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00        75.00
     Unit Hyd. peak  (cms)=       0.23         0.02
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.05         0.00          0.054 (iii)
     TIME TO PEAK    (hrs)=       1.00         2.17          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.11          9.99
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.14          0.44

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       7.93        17.56
     Dep. Storage     (mm)=       2.00         8.01
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     412.26        40.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         5.72
                   over (min)        5.00        35.00
     Storage Coeff.  (min)=       6.59 (ii)   30.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.18         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.80         0.14          0.834 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.50          1.00
     RUNOFF VOLUME    (mm)=      20.90         2.88          7.83
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.13          0.34

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40680):     1.20   0.054     1.00     9.99
     + ID2= 2 ( 40690):    25.49   0.834     1.00     7.83
       ==========================================================
       ID = 3 ( 50690):    26.69   0.888     1.00     7.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50680):   278.33   4.885     1.00    12.83
     + ID2= 2 ( 50690):    26.69   0.888     1.00     7.93
       ==========================================================
       ID = 3 ( 50700):   305.02   5.773     1.00    12.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         109.54        0.0450
                   4.00         108.85        0.0450
                   8.00         108.76        0.0450
                  12.00         108.31        0.0450
                  16.00         107.44        0.0450
                  20.00         107.22        0.0450
                  24.00         107.06        0.0450
                  28.00         107.10        0.0450
                  32.00         107.04        0.0450
                  36.00         106.98        0.0450
                  40.00         106.83        0.0350      Main Channel
                  44.00         106.49        0.0350      Main Channel
                  48.00         106.92    0.0350 /0.0450  Main Channel
                  52.00         107.19        0.0450
                  56.00         107.11        0.0450
                  60.00         107.14        0.0450
                  64.00         107.27        0.0450
                  68.00         107.71        0.0450
                  72.00         108.37        0.0450
                  80.00         109.55        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  106.60    .128E+03       0.1         0.43      35.47
        0.23  106.72    .513E+03       0.4         0.69      22.34
        0.35  106.83    .115E+04       1.1         0.90      17.05
        0.52  107.00    .277E+04       3.6         1.21      12.69
        0.69  107.17    .675E+04       8.9         1.21      12.64
        0.86  107.34    .135E+05      19.9         1.35      11.35
        1.02  107.51    .211E+05      36.3         1.58       9.70
        1.19  107.68    .291E+05      57.8         1.82       8.39
        1.36  107.85    .375E+05      84.0         2.06       7.43
        1.53  108.02    .461E+05     114.5         2.28       6.71
        1.70  108.19    .550E+05     149.1         2.49       6.15
        1.87  108.35    .642E+05     187.4         2.68       5.71
        2.04  108.52    .737E+05     228.8         2.85       5.37
        2.21  108.69    .837E+05     274.1         3.01       5.09
        2.37  108.86    .942E+05     316.2         3.08       4.97
        2.54  109.03    .105E+06     372.6         3.25       4.72
        2.71  109.20    .117E+06     433.4         3.40       4.50
        2.88  109.37    .129E+06     498.6         3.55       4.31
        3.05  109.54    .141E+06     568.2         3.70       4.14

                                          <---- hydrograph ---->   <-pipe / channel->
                                    AREA    QPEAK    TPEAK   R.V.  MAX DEPTH  MAX VEL
                                    (ha)    (cms)    (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50700)        305.02     5.77     1.00  12.40      0.59      1.21
   OUTFLOW: ID= 1 ( 60700)        305.02     4.43     1.17  12.40      0.54      1.21


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| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n           =      0.015        0.360

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         5.31
                   over (min)        5.00        30.00
     Storage Coeff.  (min)=       4.05 (ii)   27.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.24         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.15         0.04          0.164 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.42          1.00
     RUNOFF VOLUME    (mm)=      20.90         2.70          6.47
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.12          0.28

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40710):     6.35   0.164     1.00     6.47
     + ID2= 2 ( 60700):   305.02   4.432     1.17    12.40
       ==========================================================
       ID = 3 ( 50710):   311.38   4.479     1.17    12.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        13.05
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       6.62 (ii)   11.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.18         0.09
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.38         0.08          2.445 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.08          1.00
     RUNOFF VOLUME    (mm)=      20.90         3.92         18.13
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.17          0.79

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.7080      1.0040
                           0.2890      0.3890   |    0.7750      1.0700
                           0.3270      0.4500   |    0.9210      1.2580
                           0.3600      0.6030   |    1.0000      1.3280
                           0.3900      0.6540   |    1.0820      1.3980
                           0.4190      0.7110   |    1.1670      1.4690
                           0.4450      0.7680   |    1.2550      1.5390
                           0.4700      0.8260   |    1.3460      1.6090
                           0.4960      0.8830   |    1.9470      1.9930
                           0.6450      0.9400   |    0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)        25.037     2.445     1.00       18.13
   OUTFLOW: ID= 1 ( 70150)        25.037     0.273     1.33       18.11
   OVERFLOW:ID= 3 (  0003)         0.000     0.000     0.00        0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
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                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.15
                    TIME SHIFT OF PEAK FLOW         (min)= 20.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.3674

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  | Junction Command(70151) |
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                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00

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--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         8.31
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       5.52 (ii)   24.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.20         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.22         0.04        1.234 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.33         1.00
     RUNOFF VOLUME    (mm)=      20.90         3.40        16.52
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.15         0.72

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.2230      0.3310
                          0.0580      0.0840   |    0.2500      0.3590
                          0.0780      0.1040   |    0.2790      0.3870
                          0.0930      0.1240   |    0.3090      0.4160
                          0.1060      0.1440   |    0.3750      0.4780
                          0.1180      0.1640   |    0.4110      0.5120
                          0.1280      0.1840   |    0.4470      0.5450
                          0.1590      0.2550   |    0.5250      0.6130
                          0.1770      0.2790   |    0.7390      0.9130
                          0.1990      0.3030   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)    14.155     1.234      1.00      16.52
   OUTFLOW: ID= 1 ( 70160)    14.155     0.129      1.42      16.50
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.48
                  TIME SHIFT OF PEAK FLOW         (min)= 25.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1871

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  | Junction Command(70161) |
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                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00

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--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   311.38   4.479     1.17    12.28
      + ID2= 2 ( 70150):    25.04   0.273     1.33    18.11
        ================================================
        ID = 3 ( 50730):   336.41   4.742     1.17    12.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   336.41   4.742     1.17    12.71
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50730):   336.41   4.742     1.17    12.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50730):   336.41   4.742     1.17    12.71
      + ID2= 2 ( 70160):    14.15   0.129     1.42    16.50
        ================================================
        ID = 3 ( 50730):   350.57   4.870     1.17    12.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50730):   350.57   4.870     1.17    12.87
      + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50730):   350.57   4.870     1.17    12.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                  <------ DATA FOR SECTION (   1.1) ------>
                  Distance      Elevation       Manning
                      0.00         96.28        0.0450
                      9.00         95.39        0.0450
                     12.00         94.87        0.0450
                     15.00         94.17        0.0450
                     18.00         93.95        0.0450
                     21.00         94.01        0.0450
                     24.00         93.92        0.0450
                     27.00         93.98    0.0450 /0.0350  Main Channel
                     30.00         93.33        0.0350      Main Channel
                     32.00         93.73    0.0350 /0.0450  Main Channel
                     34.00         94.58        0.0450
                     35.00         95.06        0.0450
                     40.00         95.32        0.0450
                     45.00         96.12        0.0450

       <---------- TRAVEL TIME TABLE ---------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.13    93.46    .164E+03       0.0        0.36       89.51
        0.26    93.60    .654E+03       0.2        0.57       56.39
        0.40    93.73    .147E+04       0.6        0.75       43.03
        0.55    93.88    .274E+04       1.4        0.99       32.63
        0.70    94.03    .550E+04       2.8        1.00       32.28
        0.85    94.18    .104E+05       5.8        1.08       29.94
        1.00    94.33    .159E+05      10.1        1.24       26.04
        1.15    94.48    .216E+05      15.6        1.41       22.97
        1.29    94.63    .275E+05      22.2        1.57       20.64
        1.44    94.78    .338E+05      29.9        1.72       18.84
        1.59    94.93    .404E+05      38.6        1.86       17.44
        1.74    95.08    .473E+05      48.0        1.97       16.40
        1.89    95.23    .549E+05      58.1        2.05       15.76
        2.04    95.38    .637E+05      70.1        2.14       15.14
        2.19    95.53    .731E+05      83.0        2.21       14.67
        2.34    95.68    .833E+05      97.5        2.27       14.23
        2.49    95.83    .941E+05     113.5        2.34       13.82
        2.64    95.98    .106E+06     131.2        2.41       13.42
        2.79    96.13    .118E+06     150.7        2.48       13.05

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  350.57     4.87     1.17   12.87      0.80      1.06
   OUTFLOW: ID= 1 ( 60730)  350.57     2.88     1.50   12.87      0.70      1.00

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--------------------
| CALIB            |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      56.24        13.19
     Dep. Storage     (mm)=       2.00         5.50
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     680.34        43.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         7.96
                   over (min)       10.00        35.00
     Storage Coeff.  (min)=      10.65 (ii)   32.96 (ii)
     Unit Hyd. Tpeak (min)=      10.00        35.00
     Unit Hyd. peak  (cms)=       0.11         0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       5.72         0.13        5.765 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.42         1.00
     RUNOFF VOLUME    (mm)=      20.90         3.91        17.50
     TOTAL RAINFALL   (mm)=      22.90        22.90        22.90
     RUNOFF COEFFICIENT   =       0.91         0.17         0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)    69.429     5.765      1.00      17.50
   OUTFLOW: ID= 1 ( 70170)    69.429     0.175      1.92      17.48
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  3.03
                  TIME SHIFT OF PEAK FLOW         (min)= 55.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.0889

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  --------------------------
  | Junction Command(70171) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00

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--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
```

```
         ID1= 1 ( 60730):   350.57   2.885     1.50    12.87
       + ID2= 2 ( 70170):    69.43   0.175     1.92    17.48
         ================================================
         ID = 3 ( 50770):   420.00   3.052     1.50    13.63

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
         ID1= 3 ( 50770):   420.00   3.052     1.50    13.63
       + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
         ================================================
         ID = 1 ( 50770):   420.00   3.052     1.50    13.63

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         92.38        0.0450
                    3.00         90.34        0.0450
                    6.00         89.94        0.0450
                    9.00         89.83        0.0450
                   12.00         89.80        0.0450
                   15.00         89.72        0.0450
                   18.00         89.58    0.0450 /0.0350  Main Channel
                   21.00         89.15        0.0350      Main Channel
                   24.00         89.82    0.0350 /0.0450  Main Channel
                   27.00         89.76        0.0450
                   30.00         89.78        0.0450
                   33.00         89.79        0.0450
                   36.00         89.80        0.0450
                   39.00         89.72        0.0450
                   42.00         90.35        0.0450
                   45.00         91.36        0.0450
                   48.00         92.10        0.0450
                   51.00         92.21        0.0450
                   54.00         92.34        0.0450
                   56.00         92.35        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15     89.29    .298E+02        0.0         0.31      13.27
        0.29     89.44    .119E+03        0.2         0.50       8.36
        0.44     89.58    .268E+03        0.7         0.65       6.38
        0.61     89.76    .588E+03        1.9         0.79       5.25
        0.78     89.93    .179E+04        5.1         0.71       5.86
        0.96     90.10    .329E+04       11.4         0.87       4.79
        1.13     90.27    .489E+04       20.2         1.03       4.03
        1.30     90.45    .656E+04       31.5         1.19       3.47
        1.47     90.62    .828E+04       45.0         1.35       3.06
        1.65     90.79    .100E+05       60.5         1.50       2.76
        1.82     90.97    .118E+05       77.9         1.64       2.53
        1.99     91.14    .136E+05       97.1         1.77       2.34
        2.17     91.31    .155E+05      118.1         1.90       2.18
        2.34     91.48    .173E+05      140.6         2.02       2.06
        2.51     91.66    .193E+05      164.7         2.13       1.95
        2.68     91.83    .212E+05      190.5         2.23       1.86
        2.86     92.00    .232E+05      218.0         2.33       1.78
        3.03     92.18    .253E+05      242.7         2.39       1.74
        3.20     92.35    .275E+05      262.6         2.37       1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  420.00     3.05    1.50  13.63      0.67      0.76
   OUTFLOW: ID= 1 ( 60770)  420.00     3.00    1.67  13.63      0.67      0.76


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--------------------
| CALIB            |
| STANDHYD ( 40780)|   Area     (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78         11.79
     Dep. Storage     (mm)=       2.00          8.70
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     404.74         43.00
     Mannings n           =      0.015         0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
             0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
             0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
             0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
             0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
             0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
             0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
             0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
             0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
             0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
             0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.86
                   over (min)       10.00        45.00
     Storage Coeff.  (min)=       8.10 (ii)    42.98 (ii)
     Unit Hyd. Tpeak (min)=      10.00        45.00
     Unit Hyd. peak  (cms)=       0.13         0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.34         0.06          1.353 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.67          1.00
     RUNOFF VOLUME    (mm)=      20.90        2.61          11.76
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.11          0.51


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40780):    24.57   1.353     1.00    11.76
       + ID2= 2 ( 60770):   420.00   2.996     1.67    13.63
         ================================================
         ID = 3 ( 50780):   444.57   3.150     1.58    13.52

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area     (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
             0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
             0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
             0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
             0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
             0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
             0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
             0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
             0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
             0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
             0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         7.11
                   over (min)        5.00        40.00
     Storage Coeff.  (min)=       6.23 (ii)    35.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.19         0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.59         0.03          0.593 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.50          1.00
     RUNOFF VOLUME    (mm)=      20.90        3.97          14.60
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.17          0.64


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area     (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
             0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
             0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
             0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
             0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
             0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
             0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
             0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
             0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
             0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
             0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60         3.76
                   over (min)        5.00        45.00
     Storage Coeff.  (min)=       5.17 (ii)    43.63 (ii)
     Unit Hyd. Tpeak (min)=       5.00        45.00
     Unit Hyd. peak  (cms)=       0.21         0.03
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.53         0.00          0.534 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.67          1.00
     RUNOFF VOLUME    (mm)=      20.90        2.86          19.13
     TOTAL RAINFALL   (mm)=      22.90        22.90         22.90
     RUNOFF COEFFICIENT   =       0.91         0.12          0.84


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 ( 40790):     8.18   0.593     1.00    14.60
       + ID2= 2 ( 40800):     5.15   0.534     1.00    19.13
         ================================================
         ID = 3 ( 50795):    13.33   1.127     1.00    16.35

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.7780      0.6570
                           0.0040      0.0150   |    1.1550      0.7720
                           0.0090      0.0810   |    1.5780      0.8930
                           0.0120      0.1550   |    1.9240      0.9870
                           0.0140      0.2370   |    2.4190      1.1190
                           0.0160      0.3260   |    2.9510      1.2560
                           0.0620      0.3720   |    3.5980      1.3270
                           0.2560      0.4700   |    4.5570      1.3990
                           0.5310      0.5740   |    5.7230      1.4730

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332     1.127      1.00      16.35
   OUTFLOW: ID= 1 ( 70180)     13.332     0.013      3.08      16.28
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.17
                  TIME SHIFT OF PEAK FLOW         (min)=125.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2053

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  --------------------------
  | Junction Command(70181) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area     (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41         2.16
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

			TOTALS
Max.Eff.Inten.(mm/hr)=	41.60	19.76	
over (min)	5.00	20.00	
Storage Coeff. (min)=	4.71 (ii)	18.21 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.22	0.06	
PEAK FLOW (cms)=	0.14	0.07	0.192 (iii)
TIME TO PEAK (hrs)=	1.00	1.17	1.00
RUNOFF VOLUME (mm)=	21.90	7.34	12.39
TOTAL RAINFALL (mm)=	22.90	22.90	22.90
RUNOFF COEFFICIENT =	0.96	0.32	0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50790)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (40805):	3.57	0.192	1.00	12.39
	+ ID2= 2 (70180):	13.33	0.013	3.08	16.28
	ID = 3 (50790):	16.90	0.204	1.00	15.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50790)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1	ID1= 3 (50790):	16.90	0.204	1.00	15.46
	+ ID2= 2 (70181):	0.00	0.000	0.00	0.00
	ID = 1 (50790):	16.90	0.204	1.00	15.46

*** W A R N I N G : HYDROGRAPH 70181 <ID= 2> IS DRY.
*** W A R N I N G : HYDROGRAPH 0001 = HYDROGRAPH 0003

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50800)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (50780):	444.57	3.150	1.58	13.52
	+ ID2= 2 (50790):	16.90	0.204	1.00	15.46
	ID = 3 (50800):	461.47	3.193	1.58	13.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60800)		Routing time step (min)'= 5.00
IN= 2---> OUT= 1		

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	88.54	0.0450	
3.00	88.18	0.0450	
6.00	87.54	0.0450	
9.00	87.44	0.0450	
12.00	87.13	0.0450	
15.00	87.23	0.0450	
18.00	87.18	0.0450	
21.00	86.49	0.0450 /0.0350	Main Channel
24.00	85.82	0.0350	Main Channel
27.00	86.44	0.0350 /0.0450	Main Channel
30.00	87.18	0.0450	
33.00	87.16	0.0450	
36.00	87.25	0.0450	
39.00	87.46	0.0450	
42.00	87.70	0.0450	
45.00	87.80	0.0450	
48.00	88.00	0.0450	
49.00	88.12	0.0450	
50.00	88.23	0.0450	
52.00	88.59	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	85.95	.779E+02	0.0	0.37	48.75
0.25	86.07	.312E+03	0.2	0.59	30.71
0.37	86.19	.701E+03	0.5	0.77	23.44
0.49	86.32	.125E+04	1.1	0.94	19.35
0.62	86.44	.195E+04	1.9	1.09	16.67
0.77	86.59	.299E+04	3.8	1.36	13.29
0.92	86.74	.424E+04	6.2	1.59	11.42
1.07	86.89	.570E+04	9.3	1.77	10.25
1.22	87.04	.736E+04	13.0	1.92	9.44
1.37	87.19	.938E+04	16.8	1.94	9.33
1.52	87.34	.134E+05	22.9	1.86	9.74
1.66	87.49	.182E+05	31.1	1.86	9.72
1.81	87.64	.237E+05	41.6	1.91	9.51
1.96	87.79	.298E+05	53.9	1.96	9.22
2.11	87.94	.365E+05	68.9	2.05	8.84
2.26	88.09	.437E+05	86.5	2.15	8.43
2.41	88.24	.513E+05	106.2	2.25	8.04
2.56	88.39	.592E+05	128.2	2.36	7.69
2.71	88.54	.674E+05	152.5	2.46	7.36

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50800)	461.47	3.19	1.58	13.60	0.72	1.26
OUTFLOW: ID= 1 (60800)	461.47	3.04	1.75	13.60	0.71	1.24

CALIB			
STANDHYD (40820)	Area (ha)=	14.21	
ID= 1 DT= 5.0 min	Total Imp(%)=	20.97	Dir. Conn.(%)= 12.98

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.98	11.23
Dep. Storage (mm)=	2.00	9.57
Average Slope (%)=	2.30	2.30
Length (m)=	307.74	44.00
Mannings n =	0.015	0.390

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

			TOTALS
Max.Eff.Inten.(mm/hr)=	41.60	2.97	
over (min)	5.00	45.00	
Storage Coeff. (min)=	6.04 (ii)	44.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	45.00	
Unit Hyd. peak (cms)=	0.19	0.03	
PEAK FLOW (cms)=	0.21	0.05	0.220 (iii)
TIME TO PEAK (hrs)=	1.00	1.67	1.00
RUNOFF VOLUME (mm)=	20.90	2.11	4.54
TOTAL RAINFALL (mm)=	22.90	22.90	22.90
RUNOFF COEFFICIENT =	0.91	0.09	0.20

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 73.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50820)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (40820):	14.21	0.220	1.00	4.54
	+ ID2= 2 (60800):	461.47	3.038	1.75	13.60
	ID = 3 (50820):	475.68	3.086	1.75	13.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50830)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (50500):	1191.02	10.275	1.42	11.12
	+ ID2= 2 (50820):	475.68	3.086	1.75	13.32
	ID = 3 (50830):	1666.70	12.877	1.42	11.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60830)		Routing time step (min)'= 5.00
IN= 2---> OUT= 1		

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	82.12	0.0450	
20.00	81.53	0.0450	
24.00	81.26	0.0450	
28.00	81.27	0.0450	
32.00	80.34	0.0450 /0.0350	Main Channel
36.00	79.95	0.0350	Main Channel
40.00	80.78	0.0450	
44.00	81.45	0.0450	
48.00	81.53	0.0450	
52.00	81.49	0.0450	
56.00	81.51	0.0450	
60.00	81.58	0.0450	
64.00	81.58	0.0450	
68.00	81.61	0.0450	
72.00	81.75	0.0450	
80.00	82.07	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	80.05	.555E+01	0.0	0.24	5.45
0.19	80.14	.222E+02	0.1	0.38	3.43
0.29	80.24	.499E+02	0.3	0.50	2.62
0.39	80.34	.888E+02	0.7	0.60	2.16
0.50	80.45	.146E+03	1.4	0.77	1.68
0.62	80.57	.213E+03	2.5	0.91	1.43
0.73	80.68	.290E+03	3.8	1.02	1.27
0.85	80.80	.375E+03	5.4	1.13	1.15
0.96	80.91	.471E+03	7.6	1.26	1.03
1.08	81.03	.578E+03	10.1	1.37	0.95
1.19	81.14	.695E+03	13.0	1.46	0.89
1.31	81.26	.823E+03	16.2	1.53	0.85
1.43	81.37	.100E+04	19.7	1.53	0.85
1.54	81.49	.121E+04	24.1	1.56	0.84
1.66	81.60	.155E+04	29.0	1.46	0.89
1.77	81.72	.204E+04	36.4	1.39	0.93
1.89	81.84	.259E+04	45.6	1.38	0.95
2.00	81.95	.320E+04	56.7	1.38	0.94
2.12	82.07	.387E+04	69.6	1.40	0.93

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50830)	1666.70	12.88	1.42	11.75	1.19	1.46
OUTFLOW: ID= 1 (60830)	1666.70	12.87	1.42	11.75	1.19	1.46

CALIB			
STANDHYD (40830)	Area (ha)=	45.51	
ID= 1 DT= 5.0 min	Total Imp(%)=	66.71	Dir. Conn.(%)= 53.45

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	30.36	15.15
Dep. Storage (mm)=	2.00	5.54
Average Slope (%)=	1.30	1.30
Length (m)=	550.83	40.00
Mannings n =	0.015	0.270

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.000	41.60	1.917	0.00	2.83	1.00
0.167	0.00	1.083	2.60	2.000	0.00	2.92	1.00
0.250	0.00	1.167	2.60	2.083	0.60	3.00	1.00
0.333	0.00	1.250	2.60	2.167	0.60	3.08	0.00
0.417	0.00	1.333	2.60	2.250	0.60	3.17	0.00
0.500	0.00	1.417	2.60	2.333	0.60	3.25	0.00
0.583	41.60	1.500	2.60	2.417	0.60	3.33	0.00
0.667	41.60	1.583	0.00	2.500	0.60	3.42	0.00
0.750	41.60	1.667	0.00	2.583	1.00	3.50	0.00
0.833	41.60	1.750	0.00	2.667	1.00		
0.917	41.60	1.833	0.00	2.750	1.00		

			TOTALS
Max.Eff.Inten.(mm/hr)=	41.60	17.16	
over (min)	10.00	30.00	
Storage Coeff. (min)=	10.17 (ii)	27.20 (ii)	
Unit Hyd. Tpeak (min)=	10.00	30.00	
Unit Hyd. peak (cms)=	0.11	0.04	
PEAK FLOW (cms)=	2.54	0.32	2.670 (iii)
TIME TO PEAK (hrs)=	1.00	1.33	1.00

```
      RUNOFF VOLUME    (mm)=      20.90         5.22          13.60
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.23           0.59

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.45         1.59
      Dep. Storage     (mm)=       2.00         9.61
      Average Slope     (%)=       3.20         3.20
      Length            (m)=     116.69        69.00
      Mannings n          =      0.015        0.370

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         2.87
                  over (min)        5.00        50.00
      Storage Coeff.  (min)=       3.06 (ii)   47.57 (ii)
      Unit Hyd. Tpeak (min)=       5.00        50.00
      Unit Hyd. peak  (cms)=       0.27         0.02
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.03         0.01          0.035 (iii)
      TIME TO PEAK    (hrs)=       1.00         1.75           1.00
      RUNOFF VOLUME    (mm)=      20.90         2.22           4.90
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.10           0.21

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  75.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51    2.670     1.00    13.60
      + ID2= 2 ( 40840):     2.04    0.035     1.00     4.90
        ================================================
        ID = 3 ( 50840):    47.56    2.705     1.00    13.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56    2.705     1.00    13.23
      + ID2= 2 ( 60830):  1666.70   12.874     1.42    11.75
        ================================================
        ID = 1 ( 50840):  1714.25   13.650     1.42    11.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.18         0.0450
                 32.00         79.04         0.0450
                 40.00         78.76         0.0450
                 48.00         78.58         0.0450
                 56.00         78.21         0.0450
                 64.00         76.89         0.0350      Main Channel
                 72.00         78.08         0.0450
                 80.00         79.44         0.0450
                 88.00         80.28         0.0450
                 96.00         80.92         0.0450
                104.00         81.29         0.0450
                112.00         81.62         0.0450
                120.00         81.76         0.0450
                128.00         81.81         0.0450
                140.00         82.02         0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.27   77.16    .320E+03        0.2         0.48      24.00
         0.54   77.43    .128E+04        1.4         0.75      15.12
         0.81   77.70    .288E+04        4.2         0.99      11.54
         1.08   77.97    .512E+04        9.0         1.20       9.53
         1.35   78.24    .799E+04       16.6         1.42       8.02
         1.62   78.51    .119E+05       26.9         1.54       7.40
         1.89   78.78    .176E+05       41.0         1.59       7.15
         2.16   79.05    .252E+05       62.9         1.71       6.68
         2.43   79.32    .341E+05       93.9         1.89       6.05
         2.70   79.59    .438E+05      131.1         2.05       5.56
         2.97   79.86    .544E+05      175.1         2.20       5.18
         3.24   80.13    .660E+05      226.4         2.35       4.86
         3.51   80.40    .787E+05      284.9         2.48       4.60
         3.77   80.67    .924E+05      351.1         2.60       4.39
         4.04   80.94    .107E+06      425.7         2.72       4.20
         4.31   81.21    .124E+06      507.1         2.81       4.06
         4.58   81.48    .141E+06      598.4         2.90       3.94
         4.85   81.75    .161E+06      695.9         2.96       3.86
         5.12   82.02    .185E+06      800.9         2.97       3.85

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50840) 1714.25    13.65     1.42   11.79      1.24      1.33
    OUTFLOW: ID= 1 ( 60840) 1714.25    13.31     1.50   11.79      1.23      1.32


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       8.14        18.19
      Dep. Storage     (mm)=       2.00         7.29
      Average Slope     (%)=       2.00         2.00
      Length            (m)=     418.93       142.00
      Mannings n          =      0.015        0.310

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         3.13
                  over (min)       10.00        80.00
      Storage Coeff.  (min)=       7.59 (ii)   76.22 (ii)
      Unit Hyd. Tpeak (min)=      10.00        80.00
      Unit Hyd. peak  (cms)=       0.13         0.01
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.71         0.08          0.723 (iii)
      TIME TO PEAK    (hrs)=       1.00         2.25           1.00
      RUNOFF VOLUME    (mm)=      20.90         3.15           7.51
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.14           0.33

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  77.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33    0.723     1.00     7.51
      + ID2= 2 ( 60840):  1714.25   13.305     1.50    11.79
        ================================================
        ID = 3 ( 50850):  1740.58   13.410     1.50    11.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.77        35.37
      Dep. Storage     (mm)=       2.00         8.79
      Average Slope     (%)=       1.30         1.30
      Length            (m)=     611.77       120.00
      Mannings n          =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

      Max.Eff.Inten.(mm/hr)=      41.60         2.63
                  over (min)       10.00        90.00
      Storage Coeff.  (min)=      10.83 (ii)   89.38 (ii)
      Unit Hyd. Tpeak (min)=      10.00        90.00
      Unit Hyd. peak  (cms)=       0.11         0.01
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.96         0.11          1.967 (iii)
      TIME TO PEAK    (hrs)=       1.00         2.42           1.00
      RUNOFF VOLUME    (mm)=      20.90         2.79           8.94
      TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
      RUNOFF COEFFICIENT   =       0.91         0.12           0.39

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         85.55         0.0450
                 24.00         85.23         0.0450
                 28.00         85.17         0.0450
                 32.00         85.07         0.0450
                 36.00         84.96         0.0350      Main Channel
                 40.00         84.96         0.0350      Main Channel
                 44.00         85.00    0.0350 /0.0450   Main Channel
                 48.00         85.03         0.0450
                 52.00         85.18         0.0450
                 56.00         85.22         0.0450
                 60.00         85.31         0.0450
                 64.00         85.33         0.0450
                 68.00         85.38         0.0450
                 80.00         85.59         0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.01   84.96    .992E+01        0.0         0.05     238.32
         0.04   84.99    .159E+03        0.0         0.21      57.53
         0.07   85.03    .408E+03        0.2         0.32      38.32
         0.10   85.06    .751E+03        0.4         0.40      30.54
         0.13   85.09    .114E+04        0.7         0.47      25.77
         0.16   85.12    .158E+04        1.2         0.53      22.66
         0.19   85.15    .206E+04        1.7         0.59      20.45
         0.22   85.18    .259E+04        2.3         0.64      18.91
         0.25   85.21    .321E+04        3.0         0.67      18.12
         0.29   85.24    .393E+04        3.8         0.70      17.32
         0.32   85.27    .473E+04        4.8         0.73      16.56
         0.35   85.30    .562E+04        5.9         0.76      15.89
         0.38   85.34    .663E+04        7.0         0.77      15.69
         0.41   85.37    .777E+04        8.5         0.80      15.20
         0.44   85.40    .902E+04       10.2         0.82      14.69
         0.47   85.43    .104E+05       12.2         0.85      14.19
         0.50   85.46    .118E+05       14.3         0.88      13.73
         0.53   85.49    .133E+05       16.7         0.91      13.31
         0.56   85.52    .150E+05       19.3         0.94      12.91

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 40880)   56.14     1.97     1.00    8.94      0.21      0.61
    OUTFLOW: ID= 1 ( 60880)   56.14     1.26     1.17    8.92      0.17      0.54
```

```
34273>
34274> ------------------------------------------------------------------------------
34275> --------------------
34276> | ROUTEPIPE( 80880)|     PIPE Number      =   1.00
34277> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)=1900.00
34278> | DT=  5.0 min     |     Length        (m)= 888.03
34279> --------------------     Slope       (m/m)=  0.004
34280>                          Manning n         =  0.013
34281>
34282>      <------------------ TRAVEL TIME TABLE ---------------------->
34283>        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
34284>          (m)      (cu.m.)      (cms)        (m/s)        min
34285>         0.10     .213E+03       0.2         0.93        15.91
34286>         0.20     .426E+03       0.7         1.41        10.53
34287>         0.30     .639E+03       1.3         1.76         8.42
34288>         0.40     .853E+03       2.0         2.04         7.25
34289>         0.50     .107E+04       2.7         2.27         6.51
34290>         0.60     .128E+04       3.6         2.47         5.99
34291>         0.70     .149E+04       4.4         2.64         5.60
34292>         0.80     .171E+04       5.4         2.79         5.30
34293>         0.90     .192E+04       6.3         2.92         5.06
34294>         1.00     .213E+04       7.3         3.04         4.87
34295>         1.10     .234E+04       8.3         3.15         4.71
34296>         1.20     .256E+04       9.3         3.24         4.57
34297>         1.30     .277E+04      10.4         3.33         4.45
34298>         1.40     .298E+04      11.4         3.40         4.35
34299>         1.50     .320E+04      12.5         3.48         4.26
34300>         1.60     .341E+04      13.6         3.54         4.18
34301>         1.70     .362E+04      14.7         3.60         4.11
34302>         1.80     .384E+04      15.8         3.66         4.05
34303>         1.90     .405E+04      16.9         3.71         3.99
34304>                                      <---- hydrograph ---->   <-pipe / channel->
34305>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
34306>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
34307>    INFLOW : ID= 2 ( 60880)   56.14     1.26    1.17   8.92      0.30      1.75
34308>    OUTFLOW: ID= 1 ( 80880)   56.14     1.15    1.25   8.92      0.28      1.67
34309>
34310>
34311>
34312> ------------------------------------------------------------------------------
34313> --------------------
34314> | CALIB              |
34315> | STANDHYD ( 40890)|   Area    (ha)=  41.71
34316> |ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
34317> --------------------
34318>                              IMPERVIOUS    PERVIOUS (i)
34319>      Surface Area     (ha)=      18.24        23.47
34320>      Dep. Storage     (mm)=       2.00         8.20
34321>      Average Slope     (%)=       1.10         1.10
34322>      Length            (m)=     527.32        85.00
34323>      Mannings n           =      0.015        0.350
34324>
34325>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
34326>
34327>
34328>                              ---- TRANSFORMED HYETOGRAPH ----
34329>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
34330>                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
34331>                0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
34332>                0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
34333>                0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
34334>                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
34335>                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
34336>                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
34337>                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
34338>                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
34339>                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
34340>                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
34341>                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
34342>
34343>      Max.Eff.Inten.(mm/hr)=      41.60         3.30
34344>                   over (min)       10.00        75.00
34345>      Storage Coeff.  (min)=       10.42 (ii)   74.02 (ii)
34346>      Unit Hyd. Tpeak (min)=       10.00        75.00
34347>      Unit Hyd. peak  (cms)=        0.11         0.02
34348>                                                      *TOTALS*
34349>      PEAK FLOW       (cms)=        1.42         0.11          1.432 (iii)
34350>      TIME TO PEAK    (hrs)=        1.00         2.17          1.00
34351>      RUNOFF VOLUME    (mm)=       20.90         3.03          8.90
34352>      TOTAL RAINFALL   (mm)=       22.90        22.90         22.90
34353>      RUNOFF COEFFICIENT   =        0.91         0.13          0.39
34354>
34355>
34356>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
34357>             CN*  =  75.6    Ia = Dep. Storage  (Above)
34358>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
34359>            THAN THE STORAGE COEFFICIENT.
34360>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
34361>
34362> ------------------------------------------------------------------------------
34363> --------------------
34364> | CALIB              |
34365> | STANDHYD ( 40900)|   Area    (ha)=  13.56
34366> |ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
34367> --------------------
34368>                              IMPERVIOUS    PERVIOUS (i)
34369>      Surface Area     (ha)=       8.41         5.15
34370>      Dep. Storage     (mm)=       1.00         7.00
34371>      Average Slope     (%)=       1.00         2.00
34372>      Length            (m)=     300.67        43.00
34373>      Mannings n           =      0.015        0.310
34374>
34375>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
34376>
34377>
34378>                              ---- TRANSFORMED HYETOGRAPH ----
34379>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
34380>                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
34381>                0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
34382>                0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
34383>                0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
34384>                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
34385>                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
34386>                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
34387>                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
34388>                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
34389>                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
34390>                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
34391>                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
34392>
34393>      Max.Eff.Inten.(mm/hr)=      41.60        14.70
34394>                   over (min)       10.00        30.00
34395>      Storage Coeff.  (min)=        7.65 (ii)   25.71 (ii)
34396>      Unit Hyd. Tpeak (min)=       10.00        30.00
34397>      Unit Hyd. peak  (cms)=        0.13         0.04
34398>                                                      *TOTALS*
34399>      PEAK FLOW       (cms)=        0.72         0.09          0.760 (iii)
34400>      TIME TO PEAK    (hrs)=        1.00         1.33          1.00
34401>      RUNOFF VOLUME    (mm)=       21.90         4.54         12.87
34402>      TOTAL RAINFALL   (mm)=       22.90        22.90         22.90
34403>      RUNOFF COEFFICIENT   =        0.96         0.20          0.56
34404>
34405>
34406>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
34407>             CN*  =  78.2    Ia = Dep. Storage  (Above)
34408>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
34409>            THAN THE STORAGE COEFFICIENT.
34410>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
34411>
34412> ------------------------------------------------------------------------------
34413> --------------------
34414> | DUHYD    ( 90020)|
34415> | Inlet Cap.= 0.960|
34416> | #of Inlets=     1|
34417> | Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
34418> --------------------      (ha)     (cms)     (hrs)     (mm)
34419>      TOTAL HYD.(ID= 1):  13.56      0.76      1.00   12.87
34420>      ====================================================
34421>      MAJOR SYS.(ID= 2):   0.00      0.00      0.00    0.00
34422>      MINOR SYS.(ID= 3):  13.56      0.76      1.00   12.87
34423>
34424>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
34425>
34426> ------------------------------------------------------------------------------
34427>
34428> --------------------
34429> | ADD HYD  ( 50890)|
34430> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
34431> --------------------         (ha)    (cms)    (hrs)     (mm)
34432>         ID1= 1 ( 40890):    41.71   1.432     1.00     8.90
34433>       + ID2= 2 ( 50850):  1740.58  13.410     1.50    11.72
34434>         ====================================================
34435>         ID = 3 ( 50890):  1782.29  13.668     1.50    11.66
34436>
34437>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
34438> ------------------------------------------------------------------------------
34439>
34440> --------------------
34441> | ADD HYD  ( 50890)|
34442> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
34443> --------------------         (ha)    (cms)    (hrs)     (mm)
34444>         ID1= 3 ( 50890):  1782.29  13.668     1.50    11.66
34445>       + ID2= 2 ( 80880):    56.14   1.151     1.25     8.92
34446>         ====================================================
34447>         ID = 1 ( 50890):  1838.43  14.527     1.50    11.57
34448>
34449>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
34450> ------------------------------------------------------------------------------
34451>
34452> --------------------
34453> | ADD HYD  ( 50890)|
34454> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
34455> --------------------         (ha)    (cms)    (hrs)     (mm)
34456>         ID1= 1 ( 50890):  1838.43  14.527     1.50    11.57
34457>       + ID2= 2 ( 90020):    13.56   0.760     1.00    12.87
34458>         ====================================================
34459>         ID = 3 ( 50890):  1851.99  14.675     1.50    11.58
34460>
34461>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
34462> ------------------------------------------------------------------------------
34463> --------------------
34464> | ROUTE CHN( 60900)|
34465> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
34466> --------------------
34467>                 <------ DATA FOR SECTION (   1.1) ------>
34468>                 Distance      Elevation       Manning
34469>                     0.00         79.05        0.0450
34470>                     2.00         78.40        0.0450
34471>                     4.00         77.75        0.0450
34472>                     6.00         77.16        0.0450
34473>                     8.00         76.78        0.0450
34474>                    10.00         76.65        0.0450
34475>                    12.00         76.60        0.0450
34476>                    14.00         76.58        0.0450
34477>                    16.00         76.08        0.0450
34478>                    18.00         75.49    0.0450 /0.0350  Main Channel
34479>                    20.00         75.46        0.0350      Main Channel
34480>                    22.00         75.52    0.0350 /0.0450  Main Channel
34481>                    24.00         76.15        0.0450
34482>                    26.00         76.44        0.0450
34483>                    28.00         76.56        0.0450
34484>                    30.00         76.68        0.0450
34485>                    32.00         76.86        0.0450
34486>                    34.00         77.01        0.0450
34487>                    36.00         77.10        0.0450
34488>                    40.00         79.16        0.0450
34489>
34490>       <---------------------- TRAVEL TIME TABLE ---------------------->
34491>         DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
34492>           (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
34493>          0.03    75.49    .127E+02       0.0         0.14       32.03
34494>          0.22    75.68    .231E+03       0.6         0.69        6.29
34495>          0.40    75.87    .510E+03       2.0         1.01        4.28
34496>          0.59    76.05    .849E+03       4.1         1.25        3.45
34497>          0.78    76.24    .125E+04       6.9         1.43        3.02
34498>          0.97    76.43    .175E+04      10.6         1.57        2.75
34499>          1.15    76.62    .240E+04      14.6         1.57        2.75
34500>          1.34    76.80    .343E+04      21.1         1.60        2.71
34501>          1.53    76.99    .465E+04      30.1         1.68        2.58
34502>          1.71    77.18    .605E+04      41.3         1.77        2.44
34503>          1.90    77.36    .754E+04      55.7         1.92        2.26
34504>          2.09    77.55    .908E+04      72.1         2.06        2.10
34505>          2.27    77.74    .107E+05      90.6         2.20        1.96
34506>          2.46    77.92    .123E+05     111.1         2.34        1.84
34507>          2.65    78.11    .140E+05     133.5         2.48        1.74
34508>          2.84    78.30    .157E+05     157.9         2.61        1.66
34509>          3.02    78.49    .175E+05     184.1         2.73        1.58
34510>          3.21    78.67    .193E+05     212.1         2.85        1.52
34511>          3.40    78.86    .211E+05     242.1         2.97        1.46
34512>
34513>                                      <---- hydrograph ---->   <-pipe / channel->
34514>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
34515>                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
34516>    INFLOW : ID= 2 ( 50890) 1851.99    14.67     1.50  11.58      1.16      1.57
34517>    OUTFLOW: ID= 1 ( 60900) 1851.99    14.62     1.50  11.58      1.15      1.57
34518>
34519>
34520>      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
34521>
34522> ------------------------------------------------------------------------------
34523> --------------------
34524> | CALIB              |
34525> | STANDHYD ( 40910)|   Area    (ha)=   6.92
34526> |ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
34527> --------------------
34528>                              IMPERVIOUS    PERVIOUS (i)
34529>      Surface Area     (ha)=       4.77         2.15
34530>      Dep. Storage     (mm)=       2.00         7.07
34531>      Average Slope     (%)=       1.70         1.70
34532>      Length            (m)=     214.73        44.00
34533>      Mannings n           =      0.015        0.280
34534>
34535>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
34536>
34537>
34538>                              ---- TRANSFORMED HYETOGRAPH ----
34539>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
34540>                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
34541>                0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
34542>                0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
34543>                0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
34544>                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
34545>                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
34546>                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
34547>                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
34548>                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
34549>                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
34550>                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
34551>                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |
34552>
34553>      Max.Eff.Inten.(mm/hr)=      41.60        19.01
34554>                   over (min)        5.00        25.00
34555>      Storage Coeff.  (min)=        5.33 (ii)   21.65 (ii)
34556>      Unit Hyd. Tpeak (min)=        5.00        25.00
34557>      Unit Hyd. peak  (cms)=        0.21         0.05
34558>                                                      *TOTALS*
34559>      PEAK FLOW       (cms)=        0.42         0.06          0.450 (iii)
34560>      TIME TO PEAK    (hrs)=        1.00         1.25          1.00
34561>      RUNOFF VOLUME    (mm)=       20.90         5.29         13.55
34562>      TOTAL RAINFALL   (mm)=       22.90        22.90         22.90
34563>      RUNOFF COEFFICIENT   =        0.91         0.23          0.59
34564>
34565>
34566>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
34567>             CN*  =  78.9    Ia = Dep. Storage  (Above)
34568>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
34569>            THAN THE STORAGE COEFFICIENT.
34570>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
34571>
34572> ------------------------------------------------------------------------------
34573>
34574> --------------------
34575> | ADD HYD  ( 50910)|
34576> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
34577> --------------------         (ha)    (cms)    (hrs)     (mm)
34578>         ID1= 1 ( 40910):     6.92   0.450     1.00    13.55
```

```
       + ID2= 2 ( 60900):  1851.99  14.621     1.50    11.58
         ========================================================
         ID = 3 ( 50910):  1858.90  14.688     1.50    11.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       1.70         1.00
     Length            (m)=      78.30         0.00
     Mannings n            =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Max.Eff.Inten.(mm/hr)=      41.60        16.38
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.67 (ii)    2.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.29         0.29
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.67         0.00          0.672 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.00           1.00
     RUNOFF VOLUME    (mm)=      20.90         5.36          20.74
     TOTAL RAINFALL   (mm)=      22.90        22.90          22.90
     RUNOFF COEFFICIENT   =       0.91         0.23           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85   0.672     1.00    20.74
      + ID2= 2 (******):     0.00   0.000     1.00    20.64
        ================================================
        ID = 3 (******):     5.85   0.672     1.00    20.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000     1.00    17.74
      + ID2= 2 (******):     0.00   0.000     1.00    20.64
        ================================================
        ID = 3 (******):     0.00   0.000     1.00    20.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.00   0.000     1.00    20.48
      + ID2= 2 (******):     5.85   0.672     1.00    20.74
        ================================================
        ID = 1 (******):     5.85   0.672     1.00    20.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation      Manning
                   0.00        426.51       0.0450
                   0.98        426.14       0.0350      Main Channel
                   2.04        426.14       0.0350      Main Channel
                  20.51        426.51       0.0350      Main Channel

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00  426.14    .579E+00       0.0          0.03     191.52
        0.02  426.16    .114E+02       0.0          0.14      39.52
        0.04  426.18    .285E+02       0.0          0.19      27.56
        0.06  426.20    .520E+02       0.0          0.24      22.17
        0.08  426.22    .818E+02       0.1          0.28      18.92
        0.10  426.24    .118E+03       0.1          0.32      16.68
        0.12  426.26    .161E+03       0.2          0.36      15.02
        0.14  426.27    .210E+03       0.3          0.39      13.73
        0.16  426.29    .265E+03       0.3          0.42      12.69
        0.18  426.31    .326E+03       0.5          0.45      11.82
        0.20  426.33    .394E+03       0.6          0.48      11.10
        0.22  426.35    .469E+03       0.7          0.51      10.47
        0.24  426.37    .549E+03       0.9          0.54       9.93
        0.26  426.39    .637E+03       1.1          0.56       9.46
        0.28  426.41    .730E+03       1.3          0.59       9.03
        0.30  426.43    .830E+03       1.6          0.62       8.65
        0.32  426.45    .936E+03       1.9          0.64       8.31
        0.34  426.47    .105E+04       2.2          0.67       8.01
        0.35  426.49    .117E+04       2.5          0.69       7.72

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    5.85     0.67    1.00  20.74       0.21      0.50
    OUTFLOW: ID= 1 (******)    5.85     0.61    1.00  20.57       0.20      0.48


--------------------------------------------------------------------------------
--------------------
| ROUTEPIPE(******)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
| DT=  5.0 min     |     Length       (m)= 372.00
--------------------     Slope      (m/m)=  0.004
                         Manning n       =  0.013

      <----------------- TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)     (cu.m.)      (cms)        (m/s)        min
         0.05    .423E+02       0.1          0.58       10.67
         0.09    .846E+02       0.2          0.90        6.89
         0.14    .127E+03       0.4          1.15        5.39
         0.19    .169E+03       0.6          1.36        4.55
         0.24    .211E+03       0.9          1.55        4.01
         0.28    .254E+03       1.2          1.71        3.63
         0.33    .296E+03       1.5          1.85        3.34
         0.38    .338E+03       1.8          1.99        3.12
         0.43    .381E+03       2.2          2.11        2.94
         0.47    .423E+03       2.5          2.22        2.80
         0.52    .465E+03       2.9          2.32        2.67
         0.57    .507E+03       3.3          2.41        2.57
         0.62    .550E+03       3.7          2.50        2.48
         0.66    .592E+03       4.1          2.58        2.40
         0.71    .634E+03       4.5          2.66        2.33
         0.76    .677E+03       5.0          2.73        2.27
         0.81    .719E+03       5.4          2.80        2.21
         0.85    .761E+03       5.9          2.86        2.17
         0.90    .804E+03       6.3          2.92        2.12

                                     <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    4.11     0.39    1.00  17.74       0.14      1.15
    OUTFLOW: ID= 1 (******)    4.11     0.39    1.00  17.74       0.14      1.15


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.774

     PEAK FLOW       (cms)=   0.131 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   5.364
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.070

     PEAK FLOW       (cms)=   0.010 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.348
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.33   0.010     1.08     5.35
      + ID2= 2 (******):     7.90   0.131     1.25     5.36
        ================================================
        ID = 3 (******):     8.23   0.136     1.25     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
               0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
               0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
               0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
               0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
               0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
               0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
               0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
               0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   1.423

     PEAK FLOW       (cms)=   0.248 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   5.365
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
               0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
               0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
```

```
                0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.012 (i)
     TIME TO PEAK    (hrs)=   1.083
     RUNOFF VOLUME    (mm)=   5.352
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    17.88   0.248     1.33     5.36
      + ID2= 2 (******):     0.44   0.012     1.08     5.35
        ================================================
        ID = 3 (******):    18.32   0.253     1.33     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.19   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.006 (i)
     TIME TO PEAK    (hrs)=   1.000
     RUNOFF VOLUME    (mm)=   5.332
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.233

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.19   0.006     1.00     5.33
      + ID2= 2 (******):    18.32   0.253     1.33     5.36
        ================================================
        ID = 3 (******):    18.51   0.254     1.33     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    18.51   0.254     1.33     5.36
      + ID2= 2 (******):     8.23   0.136     1.25     5.36
        ================================================
        ID = 1 (******):    26.74   0.385     1.33     5.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    26.74   0.385     1.33     5.36
      + ID2= 2 (******):     4.11   0.391     1.00    17.74
        ================================================
        ID = 3 (******):    30.85   0.611     1.00     7.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    30.85   0.611     1.00     7.01
      + ID2= 2 (******):     5.85   0.613     1.00    20.57
        ================================================
        ID = 1 (******):    36.70   1.224     1.00     9.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         418.26        0.0450
                   40.58         417.27        0.0450
                   68.64         416.80        0.0450
                  140.74         415.56        0.0450
                  163.74         415.03    0.0450 /0.0350  Main Channel
                  211.93         413.30        0.0350      Main Channel
                  250.43         411.92        0.0350      Main Channel
                  258.86         411.77        0.0350      Main Channel
                  276.07         411.80        0.0350      Main Channel
                  290.03         411.70        0.0350      Main Channel
                  294.99         411.74        0.0350      Main Channel
                  298.74         411.97        0.0350      Main Channel
                  309.80         412.64        0.0350      Main Channel
                  321.40         413.39        0.0350      Main Channel
                  332.67         415.03    0.0350 /0.0450  Main Channel
                  344.47         416.63        0.0450
                  360.44         418.31        0.0450
                  381.73         419.43        0.0450
                  385.80         419.95        0.0450
                  389.30         420.75        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)         (m/s)      (min)
         0.33   412.03    .115E+05       14.5          1.18      13.21
         0.67   412.36    .302E+05       61.5          1.91       8.18
         1.00   412.70    .535E+05      139.9          2.46       6.38
         1.33   413.03    .814E+05      252.5          2.91       5.37
         1.66   413.36    .114E+06      402.0          3.32       4.72
         2.00   413.70    .150E+06      597.3          3.74       4.19
         2.33   414.03    .190E+06      834.3          4.12       3.80
         2.66   414.36    .234E+06     1114.3          4.47       3.50
         2.99   414.69    .281E+06     1439.4          4.80       3.26
         3.33   415.03    .332E+06     1811.8          5.12       3.06
         3.69   415.39    .393E+06     2361.5          5.65       2.77
         4.05   415.75    .459E+06     2978.2          6.10       2.57
         4.41   416.10    .533E+06     3668.2          6.46       2.42
         4.76   416.46    .615E+06     4437.5          6.78       2.31
         5.12   416.82    .705E+06     5290.7          7.05       2.22
         5.48   417.18    .804E+06     6232.2          7.29       2.15
         5.84   417.54    .910E+06     7276.0          7.51       2.08
         6.20   417.90    .102E+07     8417.1          7.74       2.02
         6.56   418.26    .114E+07     9654.5          7.95       1.97

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH   MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)    36.70     1.22     1.00    9.17       0.03       1.18
   OUTFLOW: ID= 1 (******)    36.70     0.89     1.17    9.17       0.02       1.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 1.000   41.60 | 1.917    0.00 |  2.83    1.00
                 0.167    0.00 | 1.083    2.60 | 2.000    0.00 |  2.92    1.00
                 0.250    0.00 | 1.167    2.60 | 2.083    0.60 |  3.00    1.00
                 0.333    0.00 | 1.250    2.60 | 2.167    0.60 |  3.08    0.00
                 0.417    0.00 | 1.333    2.60 | 2.250    0.60 |  3.17    0.00
                 0.500    0.00 | 1.417    2.60 | 2.333    0.60 |  3.25    0.00
                 0.583   41.60 | 1.500    2.60 | 2.417    0.60 |  3.33    0.00
                 0.667   41.60 | 1.583    0.00 | 2.500    0.60 |  3.42    0.00
                 0.750   41.60 | 1.667    0.00 | 2.583    1.00 |  3.50    0.00
                 0.833   41.60 | 1.750    0.00 | 2.667    1.00 |
                 0.917   41.60 | 1.833    0.00 | 2.750    1.00 |

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   0.383 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   5.365
     TOTAL RAINFALL   (mm)=  22.900
     RUNOFF COEFFICIENT   =   0.234

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    31.02   0.383     1.42     5.36
      + ID2= 2 (******):    36.70   0.893     1.17     9.17
        ================================================
        ID = 3 (******):    67.72   1.194     1.25     7.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
  Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9

DATE: 02/19/2026                          TIME: 06:03:41

USER:


COMMENTS: _____________________________________________________

--------------------------------------------------------------------------------
 ***********************************************
 ** SIMULATION : 5 Year 12 hr 5 min SCS Type I **
 ***********************************************

--------------------
|    READ STORM    |    Filename: C:\Users\DPham\AppD
|                  |              ata\Local\Temp\
|                  |              10fc3edb-a74b-4f10-8c03-341fce89bc9e\73c4848a
| Ptotal= 62.92 mm |    Comments: 5 Year 12 hr 5 min SCS Type II CC
--------------------

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.00    1.57 | 3.08    2.51 |  6.17   11.31 |  9.25    2.20
               0.08    1.57 | 3.17    2.51 |  6.25   11.31 |  9.33    2.20
               0.17    1.57 | 3.25    2.51 |  6.33   11.31 |  9.42    2.20
               0.25    1.57 | 3.33    2.51 |  6.42   11.31 |  9.50    2.20
               0.33    1.57 | 3.42    2.51 |  6.50    5.03 |  9.58    2.20
               0.42    1.57 | 3.50    2.51 |  6.58    5.03 |  9.67    2.20
               0.50    1.57 | 3.58    2.51 |  6.67    5.03 |  9.75    2.20
               0.58    1.57 | 3.67    2.51 |  6.75    5.03 |  9.83    2.20
               0.67    1.57 | 3.75    2.51 |  6.83    5.03 |  9.92    2.20
               0.75    1.57 | 3.83    2.51 |  6.92    5.03 | 10.00    1.26
               0.83    1.57 | 3.92    2.51 |  7.00    3.77 | 10.08    1.26
               0.92    1.57 | 4.00    3.77 |  7.08    3.77 | 10.17    1.26
               1.00    1.57 | 4.08    3.77 |  7.17    3.77 | 10.25    1.26
               1.08    1.57 | 4.17    3.77 |  7.25    3.77 | 10.33    1.26
               1.17    1.57 | 4.25    3.77 |  7.33    3.77 | 10.42    1.26
               1.25    1.57 | 4.33    3.77 |  7.42    3.77 | 10.50    1.26
               1.33    1.57 | 4.42    3.77 |  7.50    3.77 | 10.58    1.26
               1.42    1.57 | 4.50    5.03 |  7.58    3.77 | 10.67    1.26
               1.50    1.57 | 4.58    5.03 |  7.67    3.77 | 10.75    1.26
               1.58    1.57 | 4.67    5.03 |  7.75    3.77 | 10.83    1.26
               1.67    1.57 | 4.75    5.03 |  7.83    3.77 | 10.92    1.26
               1.75    1.57 | 4.83    5.03 |  7.92    3.77 | 11.00    1.26
               1.83    1.57 | 4.92    5.03 |  8.00    2.20 | 11.08    1.26
               1.92    1.57 | 5.00    7.54 |  8.08    2.20 | 11.17    1.26
               2.00    1.88 | 5.08    7.54 |  8.17    2.20 | 11.25    1.26
               2.08    1.88 | 5.17    7.54 |  8.25    2.20 | 11.33    1.26
               2.17    1.88 | 5.25    7.54 |  8.33    2.20 | 11.42    1.26
               2.25    1.88 | 5.33    7.54 |  8.42    2.20 | 11.50    1.26
               2.33    1.88 | 5.42    7.54 |  8.50    2.20 | 11.58    1.26
               2.42    1.88 | 5.50   30.15 |  8.58    2.20 | 11.67    1.26
               2.50    1.88 | 5.58   30.15 |  8.67    2.20 | 11.75    1.26
               2.58    1.88 | 5.67   30.15 |  8.75    2.20 | 11.83    1.26
               2.67    1.88 | 5.75   82.92 |  8.83    2.20 | 11.92    1.26
               2.75    1.88 | 5.83   82.92 |  8.92    2.20 | 12.00    1.26
               2.83    1.88 | 5.92   82.92 |  9.00    2.20 |
               2.92    1.88 | 6.00   11.31 |  9.08    2.20 |
               3.00    2.51 | 6.08   11.31 |  9.17    2.20 |
```

```
35191>
35192> ---------------------------------------------------------------------------------
35193>
35194> --------------------
35195> | CALIB            |
35196> | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
35197> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
35198> --------------------   U.H. Tp(hrs)=   0.47
35199>
35200>      Unit Hyd Qpeak  (cms)=   3.502
35201>
35202>      PEAK FLOW       (cms)=   1.742 (i)
35203>      TIME TO PEAK    (hrs)=   6.333
35204>      RUNOFF VOLUME    (mm)=  24.759
35205>      TOTAL RAINFALL   (mm)=  62.921
35206>      RUNOFF COEFFICIENT   =   0.393
35207>
35208>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
35209>
35210> ---------------------------------------------------------------------------------
35211> --------------------
35212> | CALIB            |
35213> | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
35214> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
35215> --------------------   U.H. Tp(hrs)=   0.46
35216>
35217>      Unit Hyd Qpeak  (cms)=   4.557
35218>
35219>      PEAK FLOW       (cms)=   2.252 (i)
35220>      TIME TO PEAK    (hrs)=   6.333
35221>      RUNOFF VOLUME    (mm)=  24.701
35222>      TOTAL RAINFALL   (mm)=  62.921
35223>      RUNOFF COEFFICIENT   =   0.393
35224>
35225>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
35226>
35227> ---------------------------------------------------------------------------------
35228>
35229> --------------------
35230> | ADD HYD  ( 50010)|
35231> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
35232> --------------------           (ha)    (cms)    (hrs)     (mm)
35233>         ID1= 1 ( 40010):    43.09   1.742     6.33    24.76
35234>       + ID2= 2 ( 40030):    54.88   2.252     6.33    24.70
35235>         ==========================================================
35236>         ID = 3 ( 50010):    97.97   3.993     6.33    24.73
35237>
35238>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
35239> ---------------------------------------------------------------------------------
35240> --------------------
35241> | ROUTE CHN( 60010)|
35242> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
35243> --------------------
35244>                <------ DATA FOR SECTION (   1.1) ------>
35245>                Distance      Elevation       Manning
35246>                   0.00         160.98        0.0450
35247>                  10.00         160.83        0.0450
35248>                  20.00         160.72        0.0450
35249>                  30.00         160.67        0.0450
35250>                  40.00         160.61        0.0450
35251>                  50.00         160.60        0.0450
35252>                  60.00         160.55        0.0450
35253>                  70.00         160.65        0.0450
35254>                  80.00         159.78        0.0450
35255>                  90.00         157.33    0.0450 /0.0350  Main Channel
35256>                 100.00         157.18        0.0350      Main Channel
35257>                 110.00         158.55        0.0450
35258>                 120.00         160.34        0.0450
35259>                 130.00         160.29        0.0450
35260>                 140.00         160.30        0.0450
35261>                 150.00         160.38        0.0450
35262>                 160.00         160.53        0.0450
35263>                 170.00         160.58        0.0450
35264>                 180.00         160.51        0.0450
35265>                 190.00         160.53        0.0450
35266>
35267>       <---------------------- TRAVEL TIME TABLE ----------------------->
35268>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
35269>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
35270>         0.15   157.33    .123E+04        0.4          0.43      57.39
35271>         0.32   157.50    .422E+04        2.5          0.88      27.82
35272>         0.49   157.67    .768E+04        6.3          1.20      20.47
35273>         0.66   157.83    .116E+05       11.5          1.45      16.89
35274>         0.83   158.00    .160E+05       18.2          1.67      14.70
35275>         0.99   158.17    .209E+05       26.5          1.86      13.18
35276>         1.16   158.34    .263E+05       36.3          2.03      12.06
35277>         1.33   158.51    .321E+05       47.9          2.19      11.18
35278>         1.50   158.68    .384E+05       62.7          2.40      10.21
35279>         1.67   158.84    .451E+05       79.9          2.60       9.41
35280>         1.84   159.01    .522E+05       99.0          2.79       8.79
35281>         2.00   159.18    .597E+05      120.2          2.96       8.28
35282>         2.17   159.35    .676E+05      143.3          3.11       7.86
35283>         2.34   159.52    .759E+05      168.5          3.26       7.51
35284>         2.51   159.69    .846E+05      195.8          3.40       7.20
35285>         2.68   159.86    .938E+05      224.4          3.52       6.97
35286>         2.85   160.02    .104E+06      254.6          3.61       6.78
35287>         3.02   160.19    .114E+06      287.5          3.70       6.62
35288>         3.18   160.36    .127E+06      315.8          3.64       6.72
35289>
35290>                                    <---- hydrograph ---->   <-pipe / channel->
35291>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
35292>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
35293>    INFLOW : ID= 2 ( 50010)   97.97    3.99     6.33   24.73      0.39      0.98
35294>    OUTFLOW: ID= 1 ( 60010)   97.97    3.16     6.67   24.72      0.35      0.92
35295>
35296>
35297>
35298> ---------------------------------------------------------------------------------
35299> --------------------
35300> | CALIB            |
35301> | STANDHYD ( 40020)|   Area     (ha)=  51.32
35302> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
35303> --------------------
35304>                              IMPERVIOUS    PERVIOUS (i)
35305>      Surface Area     (ha)=      33.87        17.45
35306>      Dep. Storage     (mm)=       2.00         6.20
35307>      Average Slope     (%)=       1.30         1.30
35308>      Length            (m)=     584.91        50.00
35309>      Mannings n           =      0.015        0.290
35310>
35311>      Max.Eff.Inten.(mm/hr)=      82.92        62.98
35312>                    over (min)      10.00        25.00
35313>      Storage Coeff.  (min)=       8.00 (ii)   20.08 (ii)
35314>      Unit Hyd. Tpeak (min)=      10.00        25.00
35315>      Unit Hyd. peak  (cms)=       0.13         0.05
35316>                                                          *TOTALS*
35317>      PEAK FLOW       (cms)=       5.57         1.49          6.459 (iii)
35318>      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
35319>      RUNOFF VOLUME    (mm)=      60.92        31.07          47.79
35320>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
35321>      RUNOFF COEFFICIENT   =       0.97         0.49           0.76
35322>
35323>
35324>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
35325>              CN*  =  79.5    Ia = Dep. Storage  (Above)
35326>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
35327>              THAN THE STORAGE COEFFICIENT.
35328>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
35329>
35330> ---------------------------------------------------------------------------------
35331>
35332> --------------------
35333> | ADD HYD  ( 50020)|
35334> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
35335> --------------------           (ha)    (cms)    (hrs)     (mm)
35336>         ID1= 1 ( 40020):    51.32   6.459     6.00    47.79
35337>       + ID2= 2 ( 60010):    97.97   3.160     6.67    24.72
35338>         ================================================
35339>         ID = 3 ( 50020):   149.29   6.852     6.00    32.65
35340>
35341>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
35342> ---------------------------------------------------------------------------------
35343> --------------------
35344> | ROUTE CHN( 60020)|
35345> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
35346> --------------------
35347>                <------ DATA FOR SECTION (   1.1) ------>
35348>                Distance      Elevation       Manning
35349>                   0.00         153.66        0.0450
35350>                   1.00         153.24        0.0450
35351>                   2.00         152.95        0.0450
35352>                   3.00         152.70        0.0450
35353>                   4.00         152.40        0.0450
35354>                   5.00         152.09        0.0450
35355>                   6.00         151.83        0.0450
35356>                   7.00         151.60        0.0450
35357>                   8.00         151.49    0.0450 /0.0350  Main Channel
35358>                   9.00         151.42        0.0350      Main Channel
35359>                  10.00         151.38        0.0350      Main Channel
35360>                  11.00         151.40        0.0350      Main Channel
35361>                  12.00         151.38        0.0350      Main Channel
35362>                  13.00         151.38        0.0350      Main Channel
35363>                  14.00         151.38        0.0350      Main Channel
35364>                  15.00         151.50    0.0350 /0.0450  Main Channel
35365>                  16.00         151.56        0.0450
35366>                  17.00         151.60        0.0450
35367>                  25.00         153.59        0.0450
35368>                  26.00         153.63        0.0450
35369>
35370>       <---------------------- TRAVEL TIME TABLE ----------------------->
35371>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
35372>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
35373>         0.12   151.49    .140E+03        0.2          0.36      10.54
35374>         0.23   151.60    .355E+03        0.9          0.58       6.57
35375>         0.34   151.72    .624E+03        2.0          0.74       5.11
35376>         0.45   151.83    .916E+03        3.6          0.89       4.27
35377>         0.57   151.94    .123E+04        5.5          1.02       3.73
35378>         0.68   152.05    .157E+04        7.8          1.13       3.35
35379>         0.79   152.17    .193E+04       10.5          1.24       3.06
35380>         0.90   152.28    .231E+04       13.6          1.34       2.83
35381>         1.02   152.39    .271E+04       17.1          1.43       2.65
35382>         1.13   152.50    .314E+04       20.9          1.52       2.50
35383>         1.24   152.62    .358E+04       25.2          1.60       2.37
35384>         1.35   152.73    .405E+04       29.8          1.67       2.26
35385>         1.47   152.84    .454E+04       34.9          1.75       2.17
35386>         1.58   152.95    .505E+04       40.3          1.81       2.09
35387>         1.69   153.07    .558E+04       46.2          1.88       2.01
35388>         1.80   153.18    .614E+04       52.6          1.95       1.95
35389>         1.92   153.29    .672E+04       59.4          2.01       1.88
35390>         2.03   153.40    .731E+04       66.7          2.07       1.83
35391>         2.14   153.52    .793E+04       74.5          2.14       1.77
35392>
35393>                                    <---- hydrograph ---->   <-pipe / channel->
35394>                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
35395>                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
35396>    INFLOW : ID= 2 ( 50020)  149.29    6.85     6.00   32.65      0.63      1.08
35397>    OUTFLOW: ID= 1 ( 60020)  149.29    6.84     6.08   32.65      0.63      1.08
35398>
35399>
35400>
35401> ---------------------------------------------------------------------------------
35402> --------------------
35403> | CALIB            |
35404> | STANDHYD ( 40040)|   Area     (ha)=  70.68
35405> |ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
35406> --------------------
35407>                              IMPERVIOUS    PERVIOUS (i)
35408>      Surface Area     (ha)=      52.31        18.38
35409>      Dep. Storage     (mm)=       2.00         6.00
35410>      Average Slope     (%)=       1.20         1.20
35411>      Length            (m)=     686.45        52.00
35412>      Mannings n           =      0.015        0.280
35413>
35414>      Max.Eff.Inten.(mm/hr)=      82.92        82.16
35415>                    over (min)      10.00        25.00
35416>      Storage Coeff.  (min)=       9.02 (ii)   20.17 (ii)
35417>      Unit Hyd. Tpeak (min)=      10.00        25.00
35418>      Unit Hyd. peak  (cms)=       0.12         0.05
35419>                                                          *TOTALS*
35420>      PEAK FLOW       (cms)=       7.94         2.06          9.185 (iii)
35421>      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
35422>      RUNOFF VOLUME    (mm)=      60.92        34.20          50.23
35423>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
35424>      RUNOFF COEFFICIENT   =       0.97         0.54           0.80
35425>
35426>
35427>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
35428>              CN*  =  79.4    Ia = Dep. Storage  (Above)
35429>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
35430>              THAN THE STORAGE COEFFICIENT.
35431>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
35432>
35433> ---------------------------------------------------------------------------------
35434>
35435> --------------------
35436> | ADD HYD  ( 50220)|
35437> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
35438> --------------------           (ha)    (cms)    (hrs)     (mm)
35439>         ID1= 1 ( 40040):    70.68   9.185     6.00    50.23
35440>       + ID2= 2 ( 60020):   149.29   6.839     6.08    32.65
35441>         ==========================================================
35442>         ID = 3 ( 50220):   219.97  15.684     6.08    38.30
35443>
35444>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
35445> ---------------------------------------------------------------------------------
35446> --------------------
35447> | RESERVOIR( 70010)|     OVERFLOW IS ON
35448> | IN= 2---> OUT= 1 |
35449> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
35450> --------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
35451>                             0.0000      0.0000  |    3.4010      4.4390
35452>                             0.0530      0.4910  |    4.8380      5.0560
35453>                             0.0890      0.7040  |    5.8470      5.5380
35454>                             0.2040      1.0890  |    6.5980      5.9190
35455>                             0.3240      1.4800  |    7.2560      6.2250
35456>                             0.3890      1.7490  |    7.9030      6.4820
35457>                             0.4470      1.9970  |    8.4910      6.6820
35458>                             0.5090      2.3490  |   12.0680      7.1150
35459>                             0.7420      2.9150  |   20.0000      7.2000
35460>                             1.7580      3.6690  |    0.0000      0.0000
35461>
35462>                                 AREA     QPEAK     TPEAK       R.V.
35463>                                 (ha)     (cms)     (hrs)       (mm)
35464>    INFLOW : ID= 2 ( 50220)    219.973     15.684      6.08      38.30
35465>    OUTFLOW: ID= 1 ( 70010)    219.973      3.679      7.25      38.28
35466>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
35467>
35468>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
35469>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
35470>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
35471>
35472>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 23.46
35473>                    TIME SHIFT OF PEAK FLOW          (min)= 70.00
35474>                    MAXIMUM  STORAGE   USED       (ha.m.)=  4.5590
35475>
35476> ---------------------------------------------------------------------------------
35477>
35478>   --------------------------
35479>   | Junction Command(70011) |
35480>   --------------------------
35481>
35482>                              AREA     QPEAK   TPEAK     R.V.
35483>                              (ha)     (cms)    (hrs)     (mm)
35484>   INFLOW : ID= 3( 70010)    0.00      0.00    0.00      0.00
35485>   OUTFLOW: ID= 2( 70011)    0.00      0.00    0.00      0.00
35486>
35487>   ------------------------------------------------------------------------------
35488>
35489> --------------------
35490> | ADD HYD  ( 70012)|
35491> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
35492> --------------------           (ha)    (cms)    (hrs)     (mm)
35493> *** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
35494> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
35495>         ID1= 1 ( 70010):   219.97   3.679     7.25    38.28
35496>       + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
```

```
         ==================================================
         ID = 3 ( 70012):   219.97   3.679     7.25    38.28

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        148.49        0.0450
                    3.00        148.12        0.0450
                    6.00        148.07        0.0450
                    9.00        147.63        0.0450
                   12.00        147.56        0.0450
                   15.00        147.55        0.0450
                   18.00        147.46        0.0450
                   21.00        147.41        0.0450
                   24.00        147.36        0.0450
                   27.00        147.38        0.0450
                   30.00        147.22        0.0450
                   33.00        147.00        0.0450
                   36.00        146.34        0.0450
                   39.00        145.57        0.0350      Main Channel
                   42.00        145.39        0.0350      Main Channel
                   45.00        145.66        0.0350      Main Channel
                   48.00        146.68        0.0450
                   51.00        147.50        0.0450
                   55.00        148.22        0.0450
                   60.00        148.42        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
         (m)       (m)      (cu.m.)       (cms)         (m/s)       (min)
        0.09   145.48    .145E+03        0.0           0.25        83.65
        0.18   145.57    .581E+03        0.2           0.40        52.70
        0.35   145.74    .189E+04        1.1           0.73        29.09
        0.52   145.91    .348E+04        2.7           0.99        21.52
        0.68   146.07    .532E+04        5.0           1.19        17.84
        0.85   146.24    .740E+04        7.9           1.36        15.60
        1.02   146.41    .973E+04       11.5           1.51        14.07
        1.19   146.58    .123E+05       15.9           1.64        12.94
        1.35   146.74    .152E+05       21.2           1.78        11.93
        1.52   146.91    .183E+05       27.8           1.94        10.99
        1.69   147.08    .218E+05       35.0           2.05        10.39
        1.86   147.25    .259E+05       43.0           2.12        10.03
        2.02   147.41    .309E+05       50.6           2.09        10.18
        2.19   147.58    .383E+05       61.5           2.05        10.37
        2.36   147.75    .474E+05       77.1           2.07        10.25
        2.52   147.91    .571E+05       95.6           2.14         9.95
        2.69   148.08    .672E+05      116.0           2.20         9.65
        2.86   148.25    .783E+05      138.1           2.25         9.45
        3.03   148.42    .904E+05      163.4           2.31         9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 70012)  219.97     3.68    7.25  38.28      0.59      1.07
   OUTFLOW: ID= 1 ( 60040)  219.97     3.52    7.58  38.28      0.58      1.05


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       32.94         19.34
     Dep. Storage     (mm)=        2.00          6.30
     Average Slope     (%)=        3.30          3.30
     Length            (m)=      590.36         68.00
     Mannings n           =       0.015         0.270

     Max.Eff.Inten.(mm/hr)=       82.92         77.36
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=        6.09 (ii)    15.78 (ii)
     Unit Hyd. Tpeak (min)=        5.00         20.00
     Unit Hyd. peak  (cms)=        0.19          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=        5.57          2.24          7.162 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=       60.92         33.80         47.09
     TOTAL RAINFALL   (mm)=       62.92         62.92         62.92
     RUNOFF COEFFICIENT   =        0.97          0.54          0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40050):    52.28   7.162     6.00    47.09
     + ID2= 2 ( 60040):   219.97   3.517     7.58    38.28
       ==================================================
       ID = 3 ( 50040):   272.25   7.326     6.00    39.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        146.35        0.0450
                   16.00        145.17        0.0450
                   18.00        144.62        0.0450
                   20.00        143.50        0.0450
                   26.00        141.63        0.0350      Main Channel
                   30.00        142.17        0.0350      Main Channel
                   34.00        144.28        0.0450
                   38.00        145.27        0.0450
                   50.00        146.42        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
         (m)       (m)      (cu.m.)       (cms)         (m/s)       (min)
        0.25   141.88    .129E+03        0.2           0.54        12.17
        0.50   142.13    .516E+03        1.1           0.86         7.67
        0.74   142.38    .111E+04        3.4           1.21         5.42
        0.99   142.63    .184E+04        7.0           1.50         4.37
        1.24   142.87    .269E+04       11.9           1.75         3.76
        1.49   143.12    .366E+04       18.2           1.96         3.36
        1.74   143.37    .476E+04       25.9           2.15         3.06
        1.98   143.62    .597E+04       35.3           2.33         2.82
        2.23   143.87    .729E+04       46.5           2.52         2.61
        2.48   144.11    .869E+04       59.3           2.69         2.44
        2.73   144.36    .102E+05       74.3           2.88         2.28
        2.97   144.61    .118E+05       92.4           3.09         2.13
        3.22   144.86    .136E+05      111.6           3.24         2.03
        3.47   145.11    .156E+05      133.1           3.37         1.95
        3.72   145.35    .178E+05      152.6           3.38         1.94
        3.97   145.60    .206E+05      175.6           3.37         1.95
        4.21   145.85    .239E+05      204.3           3.37         1.95
        4.46   146.10    .279E+05      238.6           3.38         1.95
        4.71   146.35    .324E+05      279.0           3.40         1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  272.25     7.33    6.00  39.97      1.01      1.52
   OUTFLOW: ID= 1 ( 60050)  272.25     6.69    6.00  39.97      0.96      1.47


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--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        142.52        0.0450
                    2.00        142.41        0.0450
                    4.00        142.26        0.0450
                    6.00        142.08        0.0450
                    8.00        141.85        0.0450
                   10.00        141.61        0.0450
                   12.00        141.38        0.0450
                   14.00        141.11        0.0450
                   16.00        140.93        0.0450
                   18.00        140.83        0.0450
                   20.00        140.73        0.0350      Main Channel
                   22.00        140.55        0.0350      Main Channel
                   24.00        140.49        0.0350      Main Channel
                   26.00        140.65        0.0350      Main Channel
                   28.00        141.04        0.0450
                   30.00        141.72        0.0450
                   32.00        142.19        0.0450
                   40.00        142.50        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY    TRAV.TIME
         (m)       (m)      (cu.m.)       (cms)         (m/s)       (min)
        0.08   140.57    .466E+02        0.0           0.23        24.59
        0.15   140.65    .155E+03        0.2           0.38        14.98
        0.23   140.73    .305E+03        0.5           0.51        11.12
        0.34   140.84    .598E+03        1.2           0.68         8.29
        0.45   140.95    .995E+03        2.3           0.80         7.09
        0.56   141.06    .147E+04        3.9           0.91         6.22
        0.68   141.17    .201E+04        6.1           1.04         5.45
        0.79   141.28    .259E+04        8.8           1.16         4.89
        0.90   141.39    .321E+04       12.0           1.27         4.47
        1.01   141.50    .389E+04       15.6           1.36         4.16
        1.12   141.61    .461E+04       19.7           1.45         3.90
        1.23   141.72    .537E+04       24.3           1.54         3.69
        1.34   141.84    .619E+04       29.4           1.61         3.52
        1.45   141.95    .707E+04       35.0           1.68         3.37
        1.56   142.06    .799E+04       41.1           1.75         3.24
        1.67   142.17    .898E+04       47.8           1.81         3.13
        1.79   142.28    .101E+05       54.6           1.85         3.07
        1.90   142.39    .113E+05       62.1           1.87         3.03
        2.01   142.50    .127E+05       70.3           1.88         3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  272.25     6.69    6.00  39.97      0.70      1.06
   OUTFLOW: ID= 1 ( 60060)  272.25     6.24    6.08  39.97      0.68      1.04


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--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.94          1.90
     Dep. Storage     (mm)=        2.00          7.70
     Average Slope     (%)=        2.60          2.60
     Length            (m)=      137.56         98.00
     Mannings n           =       0.015         0.320

     Max.Eff.Inten.(mm/hr)=       82.92         43.86
                   over (min)        5.00         25.00
     Storage Coeff.  (min)=        2.73 (ii)    20.74 (ii)
     Unit Hyd. Tpeak (min)=        5.00         25.00
     Unit Hyd. peak  (cms)=        0.29          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.17          0.14          0.250 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.25          6.00
     RUNOFF VOLUME    (mm)=       60.92         30.57         38.54
     TOTAL RAINFALL   (mm)=       62.92         62.92         62.92
     RUNOFF COEFFICIENT   =        0.97          0.49          0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40060):     2.84   0.250     6.00    38.54
     + ID2= 2 ( 60060):   272.25   6.243     6.08    39.97
       ==================================================
       ID = 3 ( 50070):   275.09   6.394     6.08    39.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       26.30         13.55
     Dep. Storage     (mm)=        2.00          5.60
     Average Slope     (%)=        1.40          1.40
     Length            (m)=      515.42         72.00
     Mannings n           =       0.015         0.270

     Max.Eff.Inten.(mm/hr)=       82.92         71.10
                   over (min)        5.00         25.00
     Storage Coeff.  (min)=        7.25 (ii)    20.67 (ii)
     Unit Hyd. Tpeak (min)=        5.00         25.00
     Unit Hyd. peak  (cms)=        0.17          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        4.54          1.30          5.317 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.25          6.00
     RUNOFF VOLUME    (mm)=       60.92         33.61         48.36
     TOTAL RAINFALL   (mm)=       62.92         62.92         62.92
     RUNOFF COEFFICIENT   =        0.97          0.53          0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50080)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40080):    39.85   5.317     6.00    48.36
     + ID2= 2 ( 50070):   275.09   6.394     6.08    39.96
       ==================================================
       ID = 3 ( 50080):   314.94  10.942     6.00    41.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ROUTE CHN( 60080)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
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```

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	141.24	0.0450	
40.00	140.58	0.0450	
50.00	140.57	0.0450	
60.00	140.36	0.0450	
70.00	140.19	0.0450	
80.00	140.15	0.0450	
90.00	139.70	0.0450	
100.00	139.54	0.0350	Main Channel
110.00	139.97	0.0450	
120.00	140.53	0.0450	
130.00	140.63	0.0450	
140.00	140.72	0.0450	
150.00	140.87	0.0450	
190.00	141.16	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.09	139.63	.150E+03	0.1	0.18	43.53
0.17	139.71	.598E+03	0.4	0.30	27.01
0.26	139.80	.126E+04	1.1	0.42	19.24
0.34	139.88	.209E+04	2.2	0.52	15.58
0.43	139.97	.307E+04	3.8	0.60	13.36
0.51	140.05	.420E+04	6.1	0.70	11.45
0.60	140.14	.548E+04	9.0	0.79	10.19
0.68	140.22	.714E+04	11.3	0.76	10.55
0.77	140.31	.919E+04	15.7	0.82	9.77
0.85	140.39	.115E+05	21.0	0.88	9.11
0.94	140.48	.141E+05	27.4	0.94	8.54
1.02	140.56	.169E+05	34.6	0.99	8.12
1.11	140.65	.205E+05	41.1	0.97	8.32
1.19	140.74	.248E+05	51.5	1.00	8.02
1.28	140.82	.296E+05	64.0	1.04	7.70
1.36	140.91	.348E+05	78.0	1.08	7.44
1.45	140.99	.407E+05	93.6	1.11	7.24
1.53	141.08	.472E+05	111.7	1.14	7.05
1.62	141.16	.545E+05	132.2	1.17	6.87

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50080)	314.94	10.94	6.00	41.02	0.67	0.77
OUTFLOW: ID= 1 (60080)	314.94	9.02	6.17	41.02	0.60	0.79

CALIB			
STANDHYD (40090)	Area (ha)= 4.45		
ID= 1 DT= 5.0 min	Total Imp(%)= 22.23	Dir. Conn.(%)= 13.77	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.99	3.46
Dep. Storage	(mm)=	2.00	9.68
Average Slope	(%)=	2.40	2.40
Length	(m)=	172.19	99.00
Mannings n	=	0.015	0.370
Max.Eff.Inten.	(mm/hr)=	82.92	28.93
over	(min)	5.00	30.00
Storage Coeff.	(min)=	3.20 (ii)	27.11 (ii)
Unit Hyd. Tpeak	(min)=	5.00	30.00
Unit Hyd. peak	(cms)=	0.27	0.04

		TOTALS
PEAK FLOW	(cms)=	0.14 0.16 0.214 (iii)
TIME TO PEAK	(hrs)=	6.00 6.33 6.00
RUNOFF VOLUME	(mm)=	60.92 24.04 29.12
TOTAL RAINFALL	(mm)=	62.92 62.92 62.92
RUNOFF COEFFICIENT	=	0.97 0.38 0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50090)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40090):	4.45	0.214	6.00	29.12
+ ID2= 2 (60080):	314.94	9.022	6.17	41.02
ID = 3 (50090):	319.39	9.172	6.17	40.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60100)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	138.71	0.0450	
4.00	136.97	0.0450	
28.00	135.94	0.0450	
32.00	135.79	0.0350	Main Channel
36.00	135.23	0.0350	Main Channel
40.00	135.71	0.0350 /0.0450	Main Channel
54.00	136.96	0.0450	
80.00	138.63	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	135.39	.631E+02	0.1	0.44	12.42
0.31	135.55	.253E+03	0.5	0.69	7.83
0.47	135.71	.568E+03	1.6	0.91	5.97
0.65	135.89	.114E+04	4.2	1.20	4.52
0.84	136.07	.209E+04	8.7	1.35	4.02
1.02	136.25	.342E+04	15.4	1.47	3.70
1.20	136.44	.511E+04	24.8	1.58	3.44
1.38	136.62	.718E+04	37.2	1.69	3.21
1.57	136.80	.962E+04	53.1	1.79	3.02
1.75	136.98	.124E+05	72.7	1.90	2.85
1.93	137.17	.155E+05	97.8	2.05	2.64
2.11	137.35	.188E+05	127.1	2.20	2.47
2.30	137.53	.223E+05	160.4	2.34	2.31
2.48	137.71	.259E+05	197.8	2.48	2.19
2.66	137.90	.298E+05	239.5	2.61	2.07
2.85	138.08	.339E+05	285.4	2.74	1.98
3.03	138.26	.381E+05	335.6	2.86	1.89
3.21	138.44	.426E+05	390.3	2.98	1.82
3.39	138.63	.472E+05	449.4	3.10	1.75

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50090)	319.39	9.17	6.17	40.85	0.85	1.36
OUTFLOW: ID= 1 (60100)	319.39	8.90	6.25	40.85	0.84	1.35

CALIB			
STANDHYD (40100)	Area (ha)= 26.90		
ID= 1 DT= 5.0 min	Total Imp(%)= 46.31	Dir. Conn.(%)= 42.42	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	12.46	14.44
Dep. Storage	(mm)=	2.00	6.20
Average Slope	(%)=	1.40	1.40
Length	(m)=	423.45	125.00
Mannings n	=	0.015	0.280
Max.Eff.Inten.	(mm/hr)=	82.92	36.81
over	(min)	5.00	35.00
Storage Coeff.	(min)=	6.45 (ii)	31.29 (ii)
Unit Hyd. Tpeak	(min)=	5.00	35.00
Unit Hyd. peak	(cms)=	0.18	0.03

		TOTALS
PEAK FLOW	(cms)=	2.46 0.78 2.789 (iii)
TIME TO PEAK	(hrs)=	6.00 6.42 6.00
RUNOFF VOLUME	(mm)=	60.92 30.93 43.65
TOTAL RAINFALL	(mm)=	62.92 62.92 62.92
RUNOFF COEFFICIENT	=	0.97 0.49 0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50110)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40100):	26.90	2.789	6.00	43.65
+ ID2= 2 (60100):	319.39	8.898	6.25	40.85
ID = 3 (50110):	346.28	10.215	6.17	41.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (40120)	Area (ha)= 44.60	Curve Number (CN)= 80.8	
ID= 1 DT= 5.0 min	Ia (mm)= 7.89	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.43		

Unit Hyd Qpeak (cms)= 3.961

PEAK FLOW (cms)= 2.061 (i)
TIME TO PEAK (hrs)= 6.333
RUNOFF VOLUME (mm)= 26.288
TOTAL RAINFALL (mm)= 62.921
RUNOFF COEFFICIENT = 0.418

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
NASHYD (40130)	Area (ha)= 63.82	Curve Number (CN)= 82.7	
ID= 1 DT= 5.0 min	Ia (mm)= 7.55	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.50		

Unit Hyd Qpeak (cms)= 4.875

PEAK FLOW (cms)= 2.869 (i)
TIME TO PEAK (hrs)= 6.417
RUNOFF VOLUME (mm)= 28.255
TOTAL RAINFALL (mm)= 62.921
RUNOFF COEFFICIENT = 0.449

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50130)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40120):	44.60	2.061	6.33	26.29
+ ID2= 2 (40130):	63.82	2.869	6.42	28.26
ID = 3 (50130):	108.42	4.900	6.33	27.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60130)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	155.27	0.0450	
2.00	155.23	0.0450	
4.00	155.21	0.0450	
6.00	155.08	0.0450	
8.00	154.94	0.0450	
10.00	154.68	0.0450	
12.00	154.21	0.0450	
14.00	153.90	0.0450	
16.00	153.41	0.0350	Main Channel
18.00	153.58	0.0350	Main Channel
20.00	153.72	0.0350 /0.0450	Main Channel
22.00	153.77	0.0450	
24.00	153.77	0.0450	
26.00	153.82	0.0450	
28.00	153.79	0.0450	
30.00	153.87	0.0450	
32.00	153.99	0.0450	
34.00	154.44	0.0450	
36.00	154.86	0.0450	
40.00	155.37	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	153.50	.107E+03	0.0	0.27	87.23
0.20	153.60	.429E+03	0.1	0.42	55.65
0.29	153.70	.991E+03	0.4	0.55	42.98
0.39	153.80	.201E+04	0.9	0.66	35.52
0.49	153.90	.408E+04	2.1	0.71	33.15
0.59	153.99	.651E+04	3.7	0.81	29.01
0.69	154.09	.916E+04	6.1	0.93	25.22
0.79	154.19	.120E+05	8.9	1.05	22.39
0.88	154.29	.149E+05	12.3	1.16	20.20
0.98	154.39	.179E+05	16.2	1.27	18.49
1.08	154.49	.211E+05	20.5	1.37	17.13
1.18	154.58	.244E+05	25.4	1.47	16.02
1.28	154.68	.278E+05	30.7	1.56	15.10
1.37	154.78	.314E+05	36.4	1.63	14.38
1.47	154.88	.351E+05	42.5	1.71	13.77
1.57	154.98	.391E+05	48.9	1.76	13.33
1.67	155.07	.433E+05	55.6	1.81	12.98
1.77	155.17	.478E+05	63.0	1.86	12.65
1.86	155.27	.528E+05	69.8	1.86	12.62

	<---- hydrograph ---->				<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50130)	108.42	4.90	6.33	27.45	0.64	0.87
OUTFLOW: ID= 1 (60130)	108.42	3.65	6.75	27.44	0.58	0.80

CALIB			
STANDHYD (40140)	Area (ha)= 65.76		
ID= 1 DT= 5.0 min	Total Imp(%)= 71.00	Dir. Conn.(%)= 61.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	46.69	19.07
Dep. Storage	(mm)=	2.00	6.30
Average Slope	(%)=	1.30	1.30
Length	(m)=	662.12	66.00
Mannings n	=	0.015	0.290
Max.Eff.Inten.	(mm/hr)=	82.92	65.64
over	(min)	10.00	25.00

```
      Storage Coeff.  (min)=       8.62 (ii)   22.65 (ii)
      Unit Hyd. Tpeak (min)=      10.00        25.00
      Unit Hyd. peak  (cms)=       0.12         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       7.61         1.61          8.560 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      60.92        31.19         49.33
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.50          0.78

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40140):    65.76   8.560     6.00    49.33
      + ID2= 2 ( 60130):   108.42   3.646     6.75    27.44
        ================================================
        ID = 3 ( 50180):   174.18   9.215     6.00    35.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.55         3.33
      Dep. Storage     (mm)=       2.00         6.90
      Average Slope     (%)=       1.00         1.00
      Length            (m)=     304.26        66.00
      Mannings n            =      0.015        0.310

      Max.Eff.Inten.(mm/hr)=      82.92        40.99
                    over (min)        5.00        25.00
      Storage Coeff.  (min)=       5.85 (ii)   24.92 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.20         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.22         0.20          2.332 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25          6.00
      RUNOFF VOLUME    (mm)=      60.92        28.39         52.14
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.45          0.83

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.74         8.05
      Dep. Storage     (mm)=       2.00         8.12
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     303.13       131.00
      Mannings n            =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      82.92        24.55
                    over (min)        5.00        35.00
      Storage Coeff.  (min)=       4.49 (ii)   33.71 (ii)
      Unit Hyd. Tpeak (min)=       5.00        35.00
      Unit Hyd. peak  (cms)=       0.23         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.20         0.32          1.323 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.50          6.00
      RUNOFF VOLUME    (mm)=      60.92        24.57         38.62
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.39          0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  77.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         155.90        0.0450
                   1.00         154.69        0.0450
                   2.00         154.30        0.0450
                   3.00         154.00    0.0450 /0.0350  Main Channel
                   4.00         153.74        0.0350      Main Channel
                   5.00         153.51        0.0350      Main Channel
                   6.00         153.46        0.0350      Main Channel
                   7.00         153.77        0.0350      Main Channel
                   8.00         154.10    0.0350 /0.0450  Main Channel
                   9.00         154.50        0.0450
                  10.00         154.84        0.0450
                  11.00         155.13        0.0450
                  12.00         155.26        0.0450
                  13.00         155.32        0.0450
                  14.00         155.42        0.0450
                  15.00         155.52        0.0450
                  16.00         155.62        0.0450
                  17.00         155.69        0.0450
                  18.00         155.76        0.0450
                  20.00         155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.11   153.57    .445E+02       0.0          0.32       21.18
        0.22   153.68    .135E+03       0.2          0.51       13.45
        0.33   153.79    .262E+03       0.4          0.66       10.46
        0.43   153.89    .423E+03       0.8          0.79        8.73
        0.54   154.00    .616E+03       1.3          0.90        7.61
        0.68   154.14    .900E+03       2.4          1.09        6.30
        0.81   154.27    .123E+04       3.8          1.27        5.40
        0.95   154.41    .160E+04       5.5          1.42        4.83
        1.08   154.54    .201E+04       7.6          1.55        4.43
        1.22   154.68    .246E+04       9.9          1.67        4.12
        1.35   154.81    .294E+04      12.7          1.78        3.86
        1.48   154.94    .345E+04      15.8          1.88        3.65
        1.62   155.08    .400E+04      19.2          1.97        3.48
        1.75   155.21    .458E+04      22.9          2.05        3.34
        1.89   155.35    .524E+04      26.8          2.11        3.26
        2.02   155.48    .599E+04      31.4          2.16        3.18
        2.16   155.62    .682E+04      36.5          2.20        3.12
        2.29   155.75    .774E+04      41.9          2.23        3.08
        2.43   155.89    .878E+04      48.0          2.25        3.05

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 40190)   13.78     1.32     6.00   38.62       0.54       0.89
OUTFLOW: ID= 1 ( 60190)   13.78     1.10     6.00   38.62       0.49       0.84
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| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      17.41         5.53
      Dep. Storage     (mm)=       2.00         6.75
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     391.08       150.00
      Mannings n            =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        30.57
                    over (min)        5.00        30.00
      Storage Coeff.  (min)=       4.89 (ii)   29.15 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.22         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       3.83         0.26          3.956 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
      RUNOFF VOLUME    (mm)=      60.92        26.70         52.28
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.42          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.4    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40180):    13.89   2.332     6.00    52.14
      + ID2= 2 ( 40200):    22.94   3.956     6.00    52.28
        ================================================
        ID = 3 ( 50200):    36.83   6.289     6.00    52.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50200):    36.83   6.289     6.00    52.23
      + ID2= 2 ( 60190):    13.78   1.105     6.00    38.62
        ================================================
        ID = 1 ( 50200):    50.61   7.394     6.00    48.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.01         1.06
      Dep. Storage     (mm)=       2.00         6.27
      Average Slope     (%)=       0.90         0.90
      Length            (m)=     201.21       118.00
      Mannings n            =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        23.83
                    over (min)        5.00        40.00
      Storage Coeff.  (min)=       4.71 (ii)   38.01 (ii)
      Unit Hyd. Tpeak (min)=       5.00        40.00
      Unit Hyd. peak  (cms)=       0.22         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.11         0.04          1.128 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.50          6.00
      RUNOFF VOLUME    (mm)=      60.92        26.61         54.66
      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
      RUNOFF COEFFICIENT   =       0.97         0.42          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40210):     6.07   1.128     6.00    54.66
      + ID2= 2 ( 50200):    50.61   7.394     6.00    48.52
        ================================================
        ID = 3 ( 50210):    56.68   8.522     6.00    49.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.62        0.0450
                   7.00         152.39        0.0450
                   8.00         152.02        0.0450
                   9.00         151.48        0.0450
                  10.00         151.01        0.0450
                  11.00         150.56    0.0450 /0.0350  Main Channel
                  12.00         150.38        0.0350      Main Channel
                  13.00         150.40        0.0350      Main Channel
                  14.00         150.36        0.0350      Main Channel
                  15.00         150.60    0.0350 /0.0450  Main Channel
                  16.00         150.99        0.0450
                  17.00         151.50        0.0450
                  18.00         151.91        0.0450
                  19.00         152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.10   150.46    .580E+02       0.1          0.30       17.06
        0.20   150.56    .160E+03       0.3          0.48       10.57
        0.32   150.68    .314E+03       0.7          0.70        7.18
        0.44   150.80    .489E+03       1.4          0.89        5.71
        0.56   150.92    .686E+03       2.3          1.03        4.89
        0.69   151.04    .904E+03       3.5          1.16        4.35
        0.81   151.16    .114E+04       4.8          1.28        3.95
        0.93   151.29    .140E+04       6.4          1.38        3.66
        1.05   151.41    .167E+04       8.1          1.48        3.42
        1.17   151.53    .196E+04      10.1          1.57        3.22
        1.29   151.65    .227E+04      12.3          1.65        3.06
        1.41   151.77    .260E+04      14.8          1.73        2.93
        1.54   151.89    .295E+04      17.5          1.80        2.81
        1.66   152.01    .331E+04      20.4          1.87        2.70
        1.78   152.13    .369E+04      23.6          1.94        2.61
        1.90   152.26    .409E+04      27.0          2.00        2.52
        2.02   152.38    .451E+04      30.7          2.06        2.45
        2.14   152.50    .500E+04      33.4          2.03        2.49
        2.26   152.62    .563E+04      37.3          2.01        2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50210)   56.68     8.52     6.00   49.18       1.07       1.49
OUTFLOW: ID= 1 ( 60210)   56.68     8.13     6.00   49.18       1.05       1.48
```

```
36415>
36416>
36417> ------------------------------------------------------------------------------
36418> --------------------
36419> | CALIB            |
36420> | STANDHYD ( 40220)|   Area    (ha)=  11.32
36421> |ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
36422> --------------------
36423>                              IMPERVIOUS    PERVIOUS (i)
36424>      Surface Area     (ha)=       8.91         2.40
36425>      Dep. Storage     (mm)=       2.00         6.17
36426>      Average Slope     (%)=       0.60         0.60
36427>      Length            (m)=     274.66        79.00
36428>      Mannings n           =      0.015        0.290
36429>
36430>      Max.Eff.Inten.(mm/hr)=      82.92        27.41
36431>                over (min)        5.00        35.00
36432>      Storage Coeff.  (min)=       6.41 (ii)   34.36 (ii)
36433>      Unit Hyd. Tpeak (min)=       5.00        35.00
36434>      Unit Hyd. peak  (cms)=       0.18         0.03
36435>                                                          *TOTALS*
36436>      PEAK FLOW       (cms)=       1.90         0.10          1.940 (iii)
36437>      TIME TO PEAK    (hrs)=       6.00         6.42           6.00
36438>      RUNOFF VOLUME    (mm)=      60.92        27.21          53.42
36439>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
36440>      RUNOFF COEFFICIENT   =       0.97         0.43           0.85
36441>
36442>
36443>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
36444>              CN*  =  79.5    Ia = Dep. Storage  (Above)
36445>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
36446>              THAN THE STORAGE COEFFICIENT.
36447>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36448>
36449> ------------------------------------------------------------------------------
36450>
36451> --------------------
36452> | ADD HYD  ( 50120)|
36453> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36454> --------------------         (ha)    (cms)    (hrs)     (mm)
36455>         ID1= 1 ( 40220):    11.32   1.940     6.00    53.42
36456>       + ID2= 2 ( 60210):    56.68   8.135     6.00    49.18
36457>         ================================================
36458>         ID = 3 ( 50120):    68.00  10.075     6.00    49.88
36459>
36460>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36461> ------------------------------------------------------------------------------
36462>
36463> --------------------
36464> | ADD HYD  ( 50140)|
36465> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36466> --------------------         (ha)    (cms)    (hrs)     (mm)
36467>         ID1= 1 ( 50120):    68.00  10.075     6.00    49.88
36468>       + ID2= 2 ( 50180):   174.18   9.215     6.00    35.70
36469>         ================================================
36470>         ID = 3 ( 50140):   242.18  19.290     6.00    39.68
36471>
36472>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36473> ------------------------------------------------------------------------------
36474> --------------------
36475> | ROUTE CHN( 60140)|
36476> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
36477> --------------------
36478>                <------ DATA FOR SECTION (   1.1) ------>
36479>                Distance      Elevation       Manning
36480>                    0.00        152.29        0.0450
36481>                    2.00        152.20        0.0450
36482>                    4.00        152.17        0.0450
36483>                    6.00        152.15        0.0450
36484>                    8.00        151.78        0.0450
36485>                   10.00        151.28        0.0450
36486>                   12.00        150.79        0.0450
36487>                   14.00        150.20    0.0450 /0.0350  Main Channel
36488>                   16.00        149.82        0.0350      Main Channel
36489>                   18.00        149.51        0.0350      Main Channel
36490>                   20.00        149.24        0.0350      Main Channel
36491>                   22.00        149.48        0.0350      Main Channel
36492>                   24.00        150.00    0.0350 /0.0450  Main Channel
36493>                   26.00        150.52        0.0450
36494>                   28.00        151.14        0.0450
36495>                   30.00        151.68        0.0450
36496>                   32.00        152.11        0.0450
36497>                   34.00        152.20        0.0450
36498>                   35.00        152.27        0.0450
36499>                   38.00        152.30        0.0450
36500>
36501>       <---------------------- TRAVEL TIME TABLE ----------------------->
36502>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
36503>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
36504>         0.15   149.39    .694E+02       0.1         0.32       19.63
36505>         0.31   149.54    .273E+03       0.4         0.53       11.92
36506>         0.46   149.70    .577E+03       1.1         0.72        8.87
36507>         0.61   149.85    .972E+03       2.2         0.87        7.30
36508>         0.76   150.00    .145E+04       3.9         1.01        6.26
36509>         0.93   150.16    .205E+04       6.4         1.18        5.36
36510>         1.09   150.33    .274E+04       9.9         1.37        4.62
36511>         1.25   150.49    .350E+04      14.2         1.54        4.11
36512>         1.42   150.65    .434E+04      19.3         1.69        3.75
36513>         1.58   150.82    .524E+04      25.2         1.83        3.47
36514>         1.74   150.98    .621E+04      31.8         1.95        3.26
36515>         1.91   151.14    .726E+04      39.2         2.06        3.09
36516>         2.07   151.31    .839E+04      47.5         2.16        2.94
36517>         2.23   151.47    .959E+04      56.6         2.25        2.82
36518>         2.40   151.63    .109E+05      66.7         2.34        2.72
36519>         2.56   151.80    .122E+05      77.6         2.41        2.63
36520>         2.72   151.96    .137E+05      89.3         2.48        2.55
36521>         2.89   152.12    .153E+05     102.0         2.55        2.49
36522>         3.05   152.29    .172E+05     111.6         2.47        2.57
36523>
36524>                                    <---- hydrograph ---->   <-pipe / channel->
36525>                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
36526>                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
36527>    INFLOW : ID= 2 ( 50140)  242.18    19.29     6.00   39.68       1.42      1.69
36528>    OUTFLOW: ID= 1 ( 60140)  242.18    17.97     6.08   39.68       1.37      1.65
36529>
36530>
36531>
36532> ------------------------------------------------------------------------------
36533> --------------------
36534> | ROUTE CHN( 60150)|
36535> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
36536> --------------------
36537>                <------ DATA FOR SECTION (   1.1) ------>
36538>                Distance      Elevation       Manning
36539>                    0.00        151.02        0.0450
36540>                    2.00        150.89        0.0450
36541>                    4.00        150.73        0.0450
36542>                    6.00        150.65        0.0450
36543>                    8.00        150.38        0.0450
36544>                   10.00        149.93        0.0450
36545>                   12.00        149.51        0.0450
36546>                   14.00        149.02    0.0450 /0.0350  Main Channel
36547>                   16.00        148.64        0.0350      Main Channel
36548>                   18.00        148.27        0.0350      Main Channel
36549>                   20.00        148.39        0.0350      Main Channel
36550>                   22.00        148.60        0.0350      Main Channel
36551>                   24.00        148.94    0.0350 /0.0450  Main Channel
36552>                   26.00        149.34        0.0450
36553>                   28.00        149.66        0.0450
36554>                   30.00        150.12        0.0450
36555>                   32.00        150.45        0.0450
36556>                   34.00        150.52        0.0450
36557>                   36.00        150.60        0.0450
36558>                   38.00        150.60        0.0450
36559>
36560>       <---------------------- TRAVEL TIME TABLE ----------------------->
36561>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
36562>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
36563>         0.11   148.38    .283E+02       0.0         0.26       13.34
36564>         0.22   148.49    .107E+03       0.2         0.44        7.98
36565>         0.34   148.60    .226E+03       0.6         0.58        6.07
36566>         0.45   148.72    .380E+03       1.3         0.72        4.90
36567>         0.56   148.83    .563E+03       2.2         0.84        4.20
36568>         0.67   148.94    .775E+03       3.5         0.95        3.72
36569>         0.80   149.07    .105E+04       5.5         1.11        3.17
36570>         0.93   149.20    .136E+04       8.2         1.27        2.77
36571>         1.06   149.32    .170E+04      11.3         1.41        2.50
36572>         1.18   149.45    .207E+04      14.9         1.52        2.31
36573>         1.31   149.58    .248E+04      19.1         1.63        2.17
36574>         1.44   149.71    .292E+04      23.8         1.72        2.05
36575>         1.57   149.83    .340E+04      29.1         1.81        1.95
36576>         1.70   149.96    .391E+04      34.9         1.89        1.87
36577>         1.82   150.09    .445E+04      41.4         1.97        1.79
36578>         1.95   150.22    .502E+04      48.4         2.04        1.73
36579>         2.08   150.35    .563E+04      56.0         2.10        1.67
36580>         2.21   150.47    .628E+04      63.9         2.15        1.64
36581>         2.33   150.60    .702E+04      71.1         2.14        1.64
36582>
36583>                                    <---- hydrograph ---->   <-pipe / channel->
36584>                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
36585>                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
36586>    INFLOW : ID= 2 ( 60140)  242.18    17.97     6.08   39.68       1.28      1.60
36587>    OUTFLOW: ID= 1 ( 60150)  242.18    18.16     6.08   39.68       1.29      1.60
36588>
36589>
36590>
36591> ------------------------------------------------------------------------------
36592> --------------------
36593> | CALIB            |
36594> | STANDHYD ( 40150)|   Area    (ha)=   5.37
36595> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
36596> --------------------
36597>                              IMPERVIOUS    PERVIOUS (i)
36598>      Surface Area     (ha)=       3.11         2.26
36599>      Dep. Storage     (mm)=       2.00         6.34
36600>      Average Slope     (%)=       2.30         2.30
36601>      Length            (m)=     189.18        45.00
36602>      Mannings n           =      0.015        0.290
36603>
36604>      Max.Eff.Inten.(mm/hr)=      82.92        51.68
36605>                over (min)        5.00        15.00
36606>      Storage Coeff.  (min)=       3.43 (ii)   13.76 (ii)
36607>      Unit Hyd. Tpeak (min)=       5.00        15.00
36608>      Unit Hyd. peak  (cms)=       0.26         0.08
36609>                                                          *TOTALS*
36610>      PEAK FLOW       (cms)=       0.64         0.20          0.815 (iii)
36611>      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
36612>      RUNOFF VOLUME    (mm)=      60.92        29.01          45.64
36613>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
36614>      RUNOFF COEFFICIENT   =       0.97         0.46           0.73
36615>
36616> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
36617>
36618>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
36619>              CN*  =  80.0    Ia = Dep. Storage  (Above)
36620>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
36621>              THAN THE STORAGE COEFFICIENT.
36622>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36623>
36624> ------------------------------------------------------------------------------
36625>
36626> --------------------
36627> | ADD HYD  ( 50160)|
36628> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
36629> --------------------         (ha)    (cms)    (hrs)     (mm)
36630>         ID1= 1 ( 40150):     5.37   0.815     6.00    45.64
36631>       + ID2= 2 ( 60150):   242.18  18.161     6.08    39.68
36632>         ================================================
36633>         ID = 3 ( 50160):   247.54  18.581     6.08    39.81
36634>
36635>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
36636> ------------------------------------------------------------------------------
36637> --------------------
36638> | CALIB            |
36639> | STANDHYD ( 40240)|   Area    (ha)=  10.28
36640> |ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
36641> --------------------
36642>                              IMPERVIOUS    PERVIOUS (i)
36643>      Surface Area     (ha)=       8.79         1.50
36644>      Dep. Storage     (mm)=       2.00         5.70
36645>      Average Slope     (%)=       3.40         3.40
36646>      Length            (m)=     261.85        70.00
36647>      Mannings n           =      0.015        0.270
36648>
36649>      Max.Eff.Inten.(mm/hr)=      82.92        47.86
36650>                over (min)        5.00        10.00
36651>      Storage Coeff.  (min)=       3.70 (ii)    8.40 (ii)
36652>      Unit Hyd. Tpeak (min)=       5.00        10.00
36653>      Unit Hyd. peak  (cms)=       0.25         0.12
36654>                                                          *TOTALS*
36655>      PEAK FLOW       (cms)=       1.99         0.15          2.137 (iii)
36656>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
36657>      RUNOFF VOLUME    (mm)=      60.92        27.46          55.86
36658>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
36659>      RUNOFF COEFFICIENT   =       0.97         0.44           0.89
36660>
36661> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
36662>
36663>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
36664>              CN*  =  79.6    Ia = Dep. Storage  (Above)
36665>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
36666>              THAN THE STORAGE COEFFICIENT.
36667>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36668>
36669> ------------------------------------------------------------------------------
36670> --------------------
36671> | CALIB            |
36672> | STANDHYD ( 40250)|   Area    (ha)=  13.36
36673> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
36674> --------------------
36675>                              IMPERVIOUS    PERVIOUS (i)
36676>      Surface Area     (ha)=       8.61         4.75
36677>      Dep. Storage     (mm)=       2.00         7.14
36678>      Average Slope     (%)=       2.00         2.00
36679>      Length            (m)=     298.43        70.00
36680>      Mannings n           =      0.015        0.320
36681>
36682>      Max.Eff.Inten.(mm/hr)=      82.92        34.32
36683>                over (min)        5.00        25.00
36684>      Storage Coeff.  (min)=       4.70 (ii)   22.26 (ii)
36685>      Unit Hyd. Tpeak (min)=       5.00        25.00
36686>      Unit Hyd. peak  (cms)=       0.22         0.05
36687>                                                          *TOTALS*
36688>      PEAK FLOW       (cms)=       1.88         0.26          2.028 (iii)
36689>      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
36690>      RUNOFF VOLUME    (mm)=      60.92        25.78          47.88
36691>      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
36692>      RUNOFF COEFFICIENT   =       0.97         0.41           0.76
36693>
36694> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
36695>
36696>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
36697>              CN*  =  78.7    Ia = Dep. Storage  (Above)
36698>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
36699>              THAN THE STORAGE COEFFICIENT.
36700>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
36701>
36702> ------------------------------------------------------------------------------
36703> --------------------
36704> | ROUTE CHN( 60240)|
36705> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
36706> --------------------
36707>                <------ DATA FOR SECTION (   1.1) ------>
36708>                Distance      Elevation       Manning
36709>                    0.00        155.56        0.0450
36710>                    2.00        155.23        0.0450
36711>                    4.00        154.58        0.0450
36712>                    6.00        153.92        0.0450
36713>                    8.00        153.53        0.0450
36714>                   10.00        152.64        0.0450
36715>                   12.00        152.43    0.0450 /0.0350  Main Channel
36716>                   14.00        152.24        0.0350      Main Channel
36717>                   16.00        152.07        0.0350      Main Channel
36718>                   18.00        152.30    0.0350 /0.0450  Main Channel
36719>                   20.00        152.46        0.0450
36720>                   22.00        155.55        0.0450
```

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	152.18	.895E+02	0.1	0.43	24.33
0.24	152.30	.356E+03	0.4	0.69	15.20
0.43	152.49	.118E+04	2.1	1.10	9.55
0.62	152.68	.234E+04	5.5	1.48	7.09
0.81	152.88	.361E+04	10.4	1.83	5.76
1.00	153.07	.494E+04	16.7	2.13	4.94
1.19	153.26	.634E+04	24.2	2.40	4.38
1.38	153.45	.781E+04	32.8	2.65	3.97
1.58	153.64	.936E+04	42.5	2.86	3.67
1.77	153.83	.110E+05	53.3	3.05	3.45
1.96	154.02	.128E+05	65.6	3.23	3.26
2.15	154.21	.147E+05	79.4	3.40	3.09
2.34	154.40	.167E+05	94.5	3.57	2.95
2.53	154.60	.188E+05	111.0	3.73	2.82
2.72	154.79	.209E+05	128.7	3.89	2.71
2.91	154.98	.231E+05	147.8	4.03	2.61
3.10	155.17	.255E+05	168.3	4.17	2.52
3.30	155.36	.279E+05	189.2	4.28	2.46
3.49	155.55	.305E+05	211.3	4.38	2.40

	<---- hydrograph ----> AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (40250)	13.36	2.03	6.00	47.88	0.42	1.09
OUTFLOW: ID= 1 (60240)	13.36	1.54	6.00	47.87	0.37	0.93

ADD HYD (50250) | 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40240):	10.28	2.137	6.00	55.86
+ ID2= 2 (50160):	247.54	18.581	6.08	39.81
ID = 3 (50250):	257.83	19.443	6.08	40.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50250) | 3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50250):	257.83	19.443	6.08	40.45
+ ID2= 2 (60240):	13.36	1.540	6.00	47.87
ID = 1 (50250):	271.19	20.919	6.08	40.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60250) | IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	149.47	0.0450	
3.00	149.39	0.0450	
6.00	149.18	0.0450	
9.00	148.85	0.0450	
12.00	148.60	0.0450	
15.00	148.16	0.0450	
18.00	147.81	0.0450	
21.00	147.50	0.0450	
24.00	147.26	0.0350	Main Channel
27.00	146.88	0.0350	Main Channel
30.00	146.72	0.0350	Main Channel
33.00	147.27	0.0350 /0.0450	Main Channel
36.00	147.60	0.0450	
39.00	147.71	0.0450	
42.00	148.10	0.0450	
45.00	148.90	0.0450	
48.00	149.05	0.0450	
51.00	149.12	0.0450	
54.00	149.43	0.0450	
57.00	149.67	0.0450	

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.14	146.85	.156E+03	0.1	0.30	40.24
0.27	146.99	.583E+03	0.4	0.51	23.51
0.41	147.13	.119E+04	1.1	0.68	17.78
0.54	147.26	.198E+04	2.2	0.82	14.76
0.69	147.41	.309E+04	4.3	1.02	11.88
0.84	147.56	.455E+04	7.2	1.15	10.50
0.98	147.70	.637E+04	10.9	1.24	9.73
1.13	147.85	.862E+04	15.8	1.32	9.12
1.28	148.00	.111E+05	21.7	1.41	8.55
1.42	148.14	.139E+05	28.7	1.50	8.06
1.57	148.29	.169E+05	37.1	1.59	7.58
1.72	148.44	.200E+05	46.5	1.68	7.16
1.87	148.58	.233E+05	57.0	1.77	6.80
2.01	148.73	.268E+05	68.3	1.85	6.53
2.16	148.88	.305E+05	80.9	1.92	6.28
2.31	149.02	.345E+05	93.2	1.95	6.17
2.45	149.17	.391E+05	106.6	1.97	6.11
2.60	149.32	.441E+05	123.2	2.02	5.97
2.75	149.47	.495E+05	139.7	2.04	5.91

	<---- hydrograph ----> AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50250)	271.19	20.92	6.08	40.82	1.26	1.40
OUTFLOW: ID= 1 (60250)	271.19	17.92	6.17	40.82	1.18	1.35

CALIB | STANDHYD (40260) | Area (ha)= 28.45 | ID= 1 DT= 5.0 min | Total Imp(%)= 56.00 Dir. Conn.(%)= 43.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	15.93	12.52
Dep. Storage	(mm)=	2.00	6.70
Average Slope	(%)=	1.30	1.30
Length	(m)=	435.49	46.00
Mannings n	=	0.015	0.300
Max.Eff.Inten.	(mm/hr)=	82.92	61.17
over	(min)	5.00	20.00
Storage Coeff.	(min)=	6.70 (ii)	18.57 (ii)
Unit Hyd. Tpeak	(min)=	5.00	20.00
Unit Hyd. peak	(cms)=	0.18	0.06
			TOTALS
PEAK FLOW	(cms)=	2.62	1.12 3.391 (iii)
TIME TO PEAK	(hrs)=	6.00	6.17 6.00
RUNOFF VOLUME	(mm)=	60.92	30.11 43.36
TOTAL RAINFALL	(mm)=	62.92	62.92 62.92
RUNOFF COEFFICIENT	=	0.97	0.48 0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50260) | 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40260):	28.45	3.391	6.00	43.36
+ ID2= 2 (60250):	271.19	17.916	6.17	40.82
ID = 3 (50260):	299.64	19.921	6.17	41.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60260) | IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	143.17	0.0450	
4.00	143.15	0.0450	
8.00	143.14	0.0450	
12.00	142.95	0.0450	
16.00	142.87	0.0450	
20.00	142.67	0.0450	
24.00	142.24	0.0450	
28.00	141.84	0.0450	
32.00	141.61	0.0450	
36.00	141.32	0.0450	
40.00	140.98	0.0450	
44.00	140.88	0.0450	
48.00	139.95	0.0350	Main Channel
52.00	140.09	0.0350	Main Channel
56.00	141.11	0.0450	
60.00	141.43	0.0450	
76.00	143.21	0.0450	

<-------------------- TRAVEL TIME TABLE ---------------------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	140.12	.479E+03	0.2	0.48	36.89
0.34	140.29	.147E+04	1.2	0.86	20.63
0.51	140.46	.272E+04	2.9	1.12	15.78
0.68	140.63	.421E+04	5.3	1.33	13.28
0.85	140.80	.596E+04	8.5	1.51	11.69
1.02	140.97	.812E+04	12.0	1.56	11.29
1.19	141.14	.111E+05	17.6	1.68	10.52
1.36	141.31	.147E+05	25.4	1.83	9.67
1.53	141.48	.191E+05	34.9	1.93	9.14
1.70	141.65	.242E+05	46.4	2.03	8.71
1.87	141.81	.301E+05	59.9	2.11	8.38
2.04	141.98	.367E+05	76.6	2.21	7.99
2.21	142.15	.439E+05	95.9	2.31	7.63
2.37	142.32	.517E+05	117.9	2.42	7.30
2.54	142.49	.600E+05	142.7	2.52	7.01
2.71	142.66	.689E+05	170.3	2.62	6.74
2.88	142.83	.785E+05	198.2	2.68	6.60
3.05	143.00	.892E+05	225.9	2.68	6.58
3.22	143.17	.101E+06	250.7	2.63	6.73

	<---- hydrograph ----> AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50260)	299.64	19.92	6.17	41.06	1.24	1.72
OUTFLOW: ID= 1 (60260)	299.64	17.32	6.25	41.06	1.18	1.67

CALIB | STANDHYD (40270) | Area (ha)= 9.83 | ID= 1 DT= 5.0 min | Total Imp(%)= 31.77 Dir. Conn.(%)= 22.01

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	6.71
Dep. Storage	(mm)=	2.00	8.03
Average Slope	(%)=	1.10	1.10
Length	(m)=	256.01	73.00
Mannings n	=	0.015	0.330
Max.Eff.Inten.	(mm/hr)=	82.92	36.17
over	(min)	5.00	30.00
Storage Coeff.	(min)=	5.13 (ii)	26.62 (ii)
Unit Hyd. Tpeak	(min)=	5.00	30.00
Unit Hyd. peak	(cms)=	0.21	0.04
			TOTALS
PEAK FLOW	(cms)=	0.48	0.39 0.672 (iii)
TIME TO PEAK	(hrs)=	6.00	6.33 6.00
RUNOFF VOLUME	(mm)=	60.92	28.62 35.73
TOTAL RAINFALL	(mm)=	62.92	62.92 62.92
RUNOFF COEFFICIENT	=	0.97	0.45 0.57

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50270) | 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40270):	9.83	0.672	6.00	35.73
+ ID2= 2 (60260):	299.64	17.320	6.25	41.06
ID = 3 (50270):	309.47	17.778	6.25	40.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB | STANDHYD (40280) | Area (ha)= 31.30 | ID= 1 DT= 5.0 min | Total Imp(%)= 64.40 Dir. Conn.(%)= 51.66

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.16	11.14
Dep. Storage	(mm)=	2.00	7.27
Average Slope	(%)=	1.10	1.10
Length	(m)=	456.83	53.00
Mannings n	=	0.015	0.310
Max.Eff.Inten.	(mm/hr)=	82.92	61.75
over	(min)	5.00	25.00
Storage Coeff.	(min)=	7.25 (ii)	21.05 (ii)
Unit Hyd. Tpeak	(min)=	5.00	25.00
Unit Hyd. peak	(cms)=	0.17	0.05
			TOTALS
PEAK FLOW	(cms)=	3.41	0.91 3.939 (iii)
TIME TO PEAK	(hrs)=	6.00	6.25 6.00
RUNOFF VOLUME	(mm)=	60.92	29.03 45.51
TOTAL RAINFALL	(mm)=	62.92	62.92 62.92
RUNOFF COEFFICIENT	=	0.97	0.46 0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50280) | 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40280):	31.30	3.939	6.00	45.51
+ ID2= 2 (50270):	309.47	17.778	6.25	40.89
ID = 3 (50280):	340.77	19.562	6.25	41.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60280) |

```
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        139.35        0.0450
                    3.00        139.19        0.0450
                    6.00        138.46        0.0450
                   27.00        137.71        0.0450
                   30.00        137.44        0.0350      Main Channel
                   33.00        137.26        0.0350      Main Channel
                   36.00        137.51        0.0350      Main Channel
                   39.00        137.64    0.0350 /0.0450  Main Channel
                   42.00        137.71        0.0450
                   57.00        139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  137.35    .361E+02        0.0         0.30      17.09
        0.18  137.44    .145E+03        0.2         0.48      10.76
        0.30  137.55    .369E+03        0.8         0.68       7.57
        0.41  137.67    .717E+03        1.9         0.82       6.28
        0.52  137.78    .124E+04        3.9         0.97       5.27
        0.63  137.89    .192E+04        6.8         1.10       4.67
        0.74  138.00    .273E+04       10.7         1.20       4.25
        0.86  138.11    .369E+04       15.7         1.30       3.93
        0.97  138.23    .480E+04       21.8         1.39       3.67
        1.08  138.34    .605E+04       29.1         1.48       3.46
        1.19  138.45    .745E+04       37.8         1.56       3.28
        1.31  138.56    .895E+04       48.6         1.67       3.07
        1.42  138.68    .105E+05       60.8         1.78       2.88
        1.53  138.79    .121E+05       74.4         1.89       2.71
        1.64  138.90    .138E+05       89.3         1.99       2.57
        1.76  139.01    .155E+05      105.5         2.10       2.44
        1.87  139.13    .172E+05      123.0         2.19       2.33
        1.98  139.24    .190E+05      140.8         2.27       2.25
        2.09  139.35    .209E+05      159.0         2.33       2.20

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    19.56    6.25  41.31      0.93      1.36
   OUTFLOW: ID= 1 ( 60280)  340.77    19.29    6.33  41.31      0.92      1.35


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area    (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.71         4.81
     Dep. Storage     (mm)=       2.00         7.99
     Average Slope     (%)=       1.60         1.60
     Length            (m)=     277.19        63.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=      82.92        57.43
               over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.80 (ii)   19.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.16         0.39         1.424 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      60.92        27.75         42.66
     TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
     RUNOFF COEFFICIENT   =       0.97         0.44          0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40300):    11.53    1.424     6.00    42.66
      + ID2= 2 ( 60280):   340.77  19.285     6.33    41.31
        ================================================
        ID = 3 ( 50300):   352.30  19.789     6.33    41.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        137.26        0.0450
                    4.00        136.94        0.0450
                    8.00        136.82        0.0450
                   12.00        136.69        0.0450
                   16.00        136.55        0.0450
                   36.00        135.52        0.0350      Main Channel
                   64.00        136.21        0.0450
                   75.00        136.49        0.0450
                   84.00        137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  135.61    .491E+02        0.1         0.26      12.99
        0.18  135.70    .196E+03        0.4         0.42       8.18
        0.27  135.79    .442E+03        1.2         0.55       6.24
        0.36  135.88    .785E+03        2.5         0.66       5.15
        0.45  135.97    .123E+04        4.6         0.77       4.44
        0.53  136.06    .177E+04        7.5         0.87       3.93
        0.62  136.15    .240E+04       11.3         0.96       3.55
        0.71  136.24    .314E+04       16.4         1.07       3.19
        0.80  136.32    .397E+04       23.3         1.20       2.84
        0.89  136.41    .490E+04       31.4         1.32       2.60
        0.98  136.50    .592E+04       40.8         1.42       2.41
        1.07  136.59    .701E+04       51.5         1.51       2.27
        1.16  136.68    .816E+04       63.4         1.59       2.14
        1.25  136.77    .938E+04       76.6         1.67       2.04
        1.34  136.86    .107E+05       91.2         1.75       1.95
        1.42  136.95    .120E+05      107.3         1.83       1.87
        1.51  137.04    .135E+05      125.8         1.91       1.78
        1.60  137.13    .149E+05      145.6         2.00       1.71
        1.69  137.22    .164E+05      166.8         2.08       1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30    19.79    6.33  41.36      0.76      1.13
   OUTFLOW: ID= 1 ( 60300)  352.30    19.74    6.33  41.36      0.76      1.13


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area    (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77         6.39
     Dep. Storage     (mm)=       2.00         8.38
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     247.21        43.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=      82.92        46.56
               over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.64 (ii)   14.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.25         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.49         0.51         0.920 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      60.92        26.81         34.83
     TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
     RUNOFF COEFFICIENT   =       0.97         0.43          0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17    0.920     6.00    34.83
      + ID2= 2 ( 60300):   352.30  19.745     6.33    41.36
        ================================================
        ID = 3 ( 50340):   361.46  20.131     6.33    41.19

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   346.28  10.215     6.17    41.07
      + ID2= 2 ( 50340):   361.46  20.131     6.33    41.19
        ================================================
        ID = 3 ( 50350):   707.75  29.619     6.33    41.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        134.05        0.0450
                   24.00        133.67        0.0450
                   30.00        131.85        0.0450
                   36.00        131.42        0.0450
                   42.00        130.48        0.0450
                   48.00        130.42        0.0350      Main Channel
                   54.00        130.42        0.0350      Main Channel
                   60.00        130.62        0.0450
                   66.00        130.77        0.0450
                   72.00        131.03        0.0450
                   78.00        131.43        0.0450
                   84.00        131.38        0.0450
                   90.00        131.33        0.0450
                   96.00        131.98        0.0450
                  102.00        133.31        0.0450
                  120.00        133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00  130.42    .133E+02        0.0         0.03     768.63
        0.19  130.61    .383E+04        1.6         0.61      40.07
        0.37  130.79    .994E+04        6.6         0.97      25.18
        0.56  130.98    .179E+05       15.1         1.23      19.81
        0.75  131.16    .272E+05       27.2         1.46      16.72
        0.93  131.35    .377E+05       42.2         1.64      14.88
        1.12  131.54    .521E+05       60.9         1.71      14.26
        1.30  131.72    .683E+05       87.2         1.86      13.07
        1.49  131.91    .857E+05      119.1         2.03      11.99
        1.68  132.09    .104E+06      157.8         2.22      10.96
        1.86  132.28    .122E+06      201.6         2.41      10.11
        2.05  132.47    .141E+06      250.1         2.59       9.41
        2.23  132.65    .160E+06      303.1         2.76       8.82
        2.42  132.84    .180E+06      360.6         2.93       8.32
        2.61  133.02    .200E+06      422.5         3.08       7.90
        2.79  133.21    .221E+06      488.7         3.24       7.53
        2.98  133.40    .242E+06      552.2         3.34       7.29
        3.16  133.58    .264E+06      613.6         3.40       7.17
        3.35  133.77    .288E+06      658.8         3.34       7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    29.62    6.33  41.13      0.78      1.48
   OUTFLOW: ID= 1 ( 60350)  707.75    26.14    6.50  41.13      0.73      1.43


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.179 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.054
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.80   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.075 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.030
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      82.92       174.69
               over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.34 (ii)    2.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.28
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.21         0.348 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
```

```
      RUNOFF VOLUME    (mm)=      60.92        47.61          52.40
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.76           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.15     0.00     0.00     0.00     0.00     0.15
        0.15     1.00     0.00     0.00     0.00     1.15
        0.15   100.00     0.00     0.00     0.00   100.15

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   1.62      0.35      6.00   52.40
     ==========================================================
     ID= 2  (   2)    :   1.31      0.15      6.00   52.40
     ID= 3  (   2)    :   0.31      0.19      6.00   52.40
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80   0.075     6.08    33.03
      + ID2= 2 (******):     1.31   0.154     6.00    52.40
        ================================================
        ID = 3 (******):     2.11   0.222     6.00    45.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22   0.179     6.17    33.05
      + ID2= 2 (******):     2.11   0.222     6.00    45.07
        ================================================
        ID = 3 (******):     4.33   0.371     6.00    38.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   4.33      0.37      6.00   38.92
     ==========================================================
     ID= 2  (   2)    :   2.17      0.19      6.00   38.92
     ID= 3  (   2)    :   2.17      0.19      6.00   38.92
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.03   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.091 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.043
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.091     6.08    33.04
      + ID2= 2 (******):     2.17   0.186     6.00    38.92
        ================================================
        ID = 3 (******):     3.20   0.265     6.00    37.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.063 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  32.979
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.524

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.063     6.08    32.98
      + ID2= 2 (******):     2.17   0.186     6.00    38.92
        ================================================
        ID = 3 (******):     2.78   0.248     6.00    37.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.54   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.053 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.011
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.031 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.825
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.522

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.031     6.00    32.83
      + ID2= 2 (******):     0.54   0.053     6.08    33.01
        ================================================
        ID = 3 (******):     0.80   0.082     6.00    32.95

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.80   0.082     6.00    32.95
      + ID2= 2 (******):     2.78   0.248     6.00    37.61
        ================================================
        ID = 1 (******):     3.58   0.329     6.00    36.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.180 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.051
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.095 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.030
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.29   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.17

     Unit Hyd Qpeak  (cms)=   0.065

     PEAK FLOW       (cms)=   0.031 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.955
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.524

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         0.65
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      82.92       252.96
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.34 (ii)    2.49 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.29

                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.34         0.46       0.805 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=      60.92        51.19       55.18
     TOTAL RAINFALL   (mm)=      62.92        62.92       62.92
     RUNOFF COEFFICIENT   =       0.97         0.81        0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.37     0.00     0.00     0.00     0.00     0.37
        0.37     1.00     0.00     0.00     0.00     1.37
        0.37   100.00     0.00     0.00     0.00   100.37

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):   3.63      0.80      6.00   55.18
     ==========================================================
     ID= 2  (   2)    :   2.97      0.37      6.00   55.18
     ID= 3  (   2)    :   0.66      0.43      6.00   55.18
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
```

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37639>
37640> --------------------
37641> | ADD HYD  (******)|
37642> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37643> --------------------         (ha)    (cms)    (hrs)     (mm)
37644>         ID1= 1 (******):     0.29   0.031     6.00    32.95
37645>       + ID2= 2 (******):     2.97   0.373     6.00    55.18
37646>         ================================================
37647>         ID = 3 (******):     3.26   0.404     6.00    53.20
37648>
37649>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37650> ------------------------------------------------------------------------------
37651>
37652> --------------------
37653> | ADD HYD  (******)|
37654> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37655> --------------------         (ha)    (cms)    (hrs)     (mm)
37656>         ID1= 1 (******):     1.01   0.095     6.08    33.03
37657>       + ID2= 2 (******):     3.26   0.404     6.00    53.20
37658>         ================================================
37659>         ID = 3 (******):     4.27   0.489     6.00    48.43
37660>
37661>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37662> ------------------------------------------------------------------------------
37663>
37664> --------------------
37665> | ADD HYD  (******)|
37666> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37667> --------------------         (ha)    (cms)    (hrs)     (mm)
37668>         ID1= 1 (******):     2.16   0.180     6.08    33.05
37669>       + ID2= 2 (******):     4.27   0.489     6.00    48.43
37670>         ================================================
37671>         ID = 3 (******):     6.43   0.642     6.00    43.27
37672>
37673>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37674> ------------------------------------------------------------------------------
37675> --------------------
37676> | CALIB            |
37677> | NASHYD   (******)|   Area     (ha)=   1.92   Curve Number    (CN)= 85.0
37678> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
37679> --------------------   U.H. Tp(hrs)=   0.23
37680>
37681>      Unit Hyd Qpeak  (cms)=   0.319
37682>
37683>      PEAK FLOW       (cms)=   0.175 (i)
37684>      TIME TO PEAK    (hrs)=   6.083
37685>      RUNOFF VOLUME    (mm)=  33.037
37686>      TOTAL RAINFALL   (mm)=  62.921
37687>      RUNOFF COEFFICIENT   =   0.525
37688>
37689>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
37690>
37691> ------------------------------------------------------------------------------
37692> --------------------
37693> | CALIB            |
37694> | NASHYD   (******)|   Area     (ha)=   0.71   Curve Number    (CN)= 85.0
37695> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
37696> --------------------   U.H. Tp(hrs)=   0.20
37697>
37698>      Unit Hyd Qpeak  (cms)=   0.136
37699>
37700>      PEAK FLOW       (cms)=   0.070 (i)
37701>      TIME TO PEAK    (hrs)=   6.083
37702>      RUNOFF VOLUME    (mm)=  33.011
37703>      TOTAL RAINFALL   (mm)=  62.921
37704>      RUNOFF COEFFICIENT   =   0.525
37705>
37706>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
37707>
37708> ------------------------------------------------------------------------------
37709> --------------------
37710> | CALIB            |
37711> | STANDHYD (******)|   Area     (ha)=   8.29
37712> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
37713> --------------------
37714>                              IMPERVIOUS    PERVIOUS (i)
37715>      Surface Area     (ha)=       8.21         0.08
37716>      Dep. Storage     (mm)=       2.00         4.13
37717>      Average Slope     (%)=       1.00         2.00
37718>      Length            (m)=      30.00        30.00
37719>      Mannings n            =      0.013        0.025
37720>
37721>      Max.Eff.Inten.(mm/hr)=      82.92        57.00
37722>                  over (min)       5.00         5.00
37723>      Storage Coeff.  (min)=       1.34 (ii)    1.59 (ii)
37724>      Unit Hyd. Tpeak (min)=       5.00         5.00
37725>      Unit Hyd. peak  (cms)=       0.33         0.33
37726>                                                        *TOTALS*
37727>      PEAK FLOW       (cms)=       1.89         0.01          1.904 (iii)
37728>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
37729>      RUNOFF VOLUME    (mm)=      60.92        34.52         60.66
37730>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
37731>      RUNOFF COEFFICIENT   =       0.97         0.55          0.96
37732>
37733> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
37734>
37735>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
37736>            CN*  =  86.0    Ia = Dep. Storage  (Above)
37737>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
37738>            THAN THE STORAGE COEFFICIENT.
37739>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
37740>
37741> ------------------------------------------------------------------------------
37742> --------------------
37743> | CALIB            |
37744> | STANDHYD (******)|   Area     (ha)=   1.19
37745> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
37746> --------------------
37747>                              IMPERVIOUS    PERVIOUS (i)
37748>      Surface Area     (ha)=       1.18         0.01
37749>      Dep. Storage     (mm)=       2.00         4.13
37750>      Average Slope     (%)=       1.00         2.00
37751>      Length            (m)=      30.00        30.00
37752>      Mannings n            =      0.013        0.025
37753>
37754>      Max.Eff.Inten.(mm/hr)=      82.92        57.00
37755>                  over (min)       5.00         5.00
37756>      Storage Coeff.  (min)=       1.34 (ii)    1.59 (ii)
37757>      Unit Hyd. Tpeak (min)=       5.00         5.00
37758>      Unit Hyd. peak  (cms)=       0.33         0.33
37759>                                                        *TOTALS*
37760>      PEAK FLOW       (cms)=       0.27         0.00          0.273 (iii)
37761>      TIME TO PEAK    (hrs)=       6.00         6.00          6.00
37762>      RUNOFF VOLUME    (mm)=      60.92        34.52         60.65
37763>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
37764>      RUNOFF COEFFICIENT   =       0.97         0.55          0.96
37765>
37766> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
37767>
37768>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
37769>            CN*  =  86.0    Ia = Dep. Storage  (Above)
37770>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
37771>            THAN THE STORAGE COEFFICIENT.
37772>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
37773>
37774> ------------------------------------------------------------------------------
37775>
37776> --------------------
37777> | ADD HYD  (******)|
37778> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37779> --------------------         (ha)    (cms)    (hrs)     (mm)
37780>         ID1= 1 (******):     0.71   0.070     6.08    33.01
37781>       + ID2= 2 (******):     1.92   0.175     6.08    33.04
37782>         ================================================
37783>         ID = 3 (******):     2.63   0.245     6.08    33.03
37784>
37785>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37786> ------------------------------------------------------------------------------
37787>
37788> --------------------
37789> | ADD HYD  (******)|
37790> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
37791> --------------------         (ha)    (cms)    (hrs)     (mm)
37792>         ID1= 3 (******):     2.63   0.245     6.08    33.03
37793>       + ID2= 2 (******):     8.29   1.904     6.00    60.66
37794>         ================================================
37795>         ID = 1 (******):    10.92   2.125     6.00    54.00
37796>
37797>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37798> ------------------------------------------------------------------------------
37799>
37800> --------------------
37801> | ADD HYD  (******)|
37802> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37803> --------------------         (ha)    (cms)    (hrs)     (mm)
37804>         ID1= 1 (******):    10.92   2.125     6.00    54.00
37805>       + ID2= 2 (******):     1.19   0.273     6.00    60.65
37806>         ================================================
37807>         ID = 3 (******):    12.11   2.398     6.00    54.66
37808>
37809>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37810> ------------------------------------------------------------------------------
37811>
37812> --------------------
37813> | ADD HYD  (******)|
37814> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
37815> --------------------         (ha)    (cms)    (hrs)     (mm)
37816>         ID1= 3 (******):    12.11   2.398     6.00    54.66
37817>       + ID2= 2 (******):     3.20   0.265     6.00    37.02
37818>         ================================================
37819>         ID = 1 (******):    15.31   2.663     6.00    50.97
37820>
37821>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37822> ------------------------------------------------------------------------------
37823>
37824> --------------------
37825> | ADD HYD  (******)|
37826> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37827> --------------------         (ha)    (cms)    (hrs)     (mm)
37828>         ID1= 1 (******):    15.31   2.663     6.00    50.97
37829>       + ID2= 2 (******):     3.58   0.329     6.00    36.57
37830>         ================================================
37831>         ID = 3 (******):    18.88   2.993     6.00    48.25
37832>
37833>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37834> ------------------------------------------------------------------------------
37835>
37836> --------------------
37837> | ADD HYD  (******)|
37838> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
37839> --------------------         (ha)    (cms)    (hrs)     (mm)
37840>         ID1= 3 (******):    18.88   2.993     6.00    48.25
37841>       + ID2= 2 (******):     6.43   0.642     6.00    43.27
37842>         ================================================
37843>         ID = 1 (******):    25.32   3.634     6.00    46.98
37844>
37845>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37846> ------------------------------------------------------------------------------
37847> --------------------
37848> | RESERVOIR(******)|     OVERFLOW IS ON
37849> | IN= 2---> OUT= 1 |
37850> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
37851> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
37852>                            0.0000      0.0000  |    1.0509      1.2511
37853>                            0.0499      0.1231  |    1.2225      1.4841
37854>                            0.0887      0.3106  |    1.2743      1.5652
37855>                            0.1027      0.4143  |    1.3240      1.6479
37856>                            0.1415      0.5824  |    1.5681      1.7322
37857>                            0.4137      0.7655  |    1.9730      1.8182
37858>                            0.8423      1.0330  |    2.4824      1.9059
37859>
37860>                                  AREA     QPEAK     TPEAK       R.V.
37861>                                  (ha)     (cms)     (hrs)       (mm)
37862>    INFLOW : ID= 2 (******)     25.315      3.634      6.00      46.98
37863>    OUTFLOW: ID= 1 (******)     25.315      0.395      6.83      46.96
37864>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
37865>
37866>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
37867>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
37868>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
37869>
37870>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.87
37871>                    TIME SHIFT OF PEAK FLOW         (min)= 50.00
37872>                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.7531
37873>
37874> ------------------------------------------------------------------------------
37875>
37876>   --------------------------
37877>   | Junction Command(30361002) |
37878>   --------------------------
37879>
37880>                              AREA     QPEAK   TPEAK     R.V.
37881>                              (ha)     (cms)    (hrs)    (mm)
37882>   INFLOW : ID= 3(30361001)    0.00     0.00    0.00     0.00
37883>   OUTFLOW: ID= 2(30361002)    0.00     0.00    0.00     0.00
37884>
37885>   ---------------------------------------------------------------------------
37886> --------------------
37887> | CALIB            |
37888> | NASHYD   (******)|   Area     (ha)=   0.70   Curve Number    (CN)= 85.0
37889> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
37890> --------------------   U.H. Tp(hrs)=   0.21
37891>
37892>      Unit Hyd Qpeak  (cms)=   0.127
37893>
37894>      PEAK FLOW       (cms)=   0.067 (i)
37895>      TIME TO PEAK    (hrs)=   6.083
37896>      RUNOFF VOLUME    (mm)=  33.022
37897>      TOTAL RAINFALL   (mm)=  62.921
37898>      RUNOFF COEFFICIENT   =   0.525
37899>
37900>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
37901>
37902> ------------------------------------------------------------------------------
37903>
37904> --------------------
37905> | ADD HYD  ( 50360)|
37906> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37907> --------------------         (ha)    (cms)    (hrs)     (mm)
37908> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
37909> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
37910>         ID1= 1 (******):    25.32   0.395     6.83    46.96
37911>       + ID2= 2 (******):     0.00   0.000     0.00     0.00
37912>         ================================================
37913>         ID = 3 ( 50360):    25.32   0.395     6.83    46.96
37914>
37915>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37916> ------------------------------------------------------------------------------
37917>
37918> --------------------
37919> | ADD HYD  ( 50360)|
37920> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
37921> --------------------         (ha)    (cms)    (hrs)     (mm)
37922>         ID1= 3 ( 50360):    25.32   0.395     6.83    46.96
37923>       + ID2= 2 (******):     0.70   0.067     6.08    33.02
37924>         ================================================
37925>         ID = 1 ( 50360):    26.02   0.407     6.75    46.58
37926>
37927>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37928> ------------------------------------------------------------------------------
37929>
37930> --------------------
37931> | ADD HYD  ( 50360)|
37932> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
37933> --------------------         (ha)    (cms)    (hrs)     (mm)
37934>         ID1= 1 ( 50360):    26.02   0.407     6.75    46.58
37935>       + ID2= 2 ( 60350):   707.75  26.143     6.50    41.13
37936>         ================================================
37937>         ID = 3 ( 50360):   733.76  26.534     6.50    41.32
37938>
37939>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
37940> ------------------------------------------------------------------------------
37941> --------------------
37942> | ROUTE CHN( 60390)|
37943> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
37944> --------------------
```

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	127.30	0.0450	
6.00	127.39	0.0450	
12.00	127.46	0.0450	
18.00	126.87	0.0450	
24.00	125.30	0.0450	
30.00	123.90	0.0450	
36.00	123.14	0.0450	
42.00	123.07	0.0450	
48.00	122.88	0.0450	
54.00	122.90	0.0450	
60.00	122.95	0.0450	
66.00	123.04	0.0450	
72.00	123.15	0.0350	Main Channel
78.00	122.98	0.0450	
84.00	122.97	0.0450	
90.00	122.96	0.0450	
96.00	122.92	0.0450	
102.00	123.50	0.0450	
108.00	124.18	0.0450	
120.00	127.45	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.09	122.98	.246E+03	0.4	0.31	10.02
0.33	123.21	.251E+04	11.8	0.86	3.57
0.56	123.45	.538E+04	39.9	1.37	2.25
0.80	123.68	.842E+04	81.1	1.78	1.73
1.04	123.92	.116E+05	134.5	2.13	1.44
1.27	124.16	.150E+05	200.0	2.46	1.25
1.51	124.39	.185E+05	278.3	2.78	1.11
1.74	124.63	.220E+05	367.4	3.08	1.00
1.98	124.86	.257E+05	466.7	3.35	0.92
2.22	125.10	.294E+05	576.1	3.61	0.85
2.45	125.34	.332E+05	695.4	3.86	0.80
2.69	125.57	.371E+05	824.8	4.10	0.75
2.92	125.81	.410E+05	963.8	4.33	0.71
3.16	126.04	.451E+05	1112.3	4.55	0.68
3.39	126.28	.492E+05	1270.1	4.76	0.65
3.63	126.51	.534E+05	1437.3	4.97	0.62
3.87	126.75	.576E+05	1613.7	5.16	0.60
4.10	126.99	.620E+05	1791.1	5.33	0.58
4.34	127.22	.665E+05	1970.4	5.47	0.56

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50360)	733.76	26.53	6.50	41.32	0.45	1.07
OUTFLOW: ID= 1 (60390)	733.76	26.53	6.50	41.32	0.45	1.07

CALIB					
NASHYD (40390)	Area (ha)=	20.55	Curve Number (CN)=	80.4	
ID= 1 DT= 5.0 min	Ia (mm)=	8.47	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.20			

Unit Hyd Qpeak (cms)= 3.925

PEAK FLOW (cms)= 1.565 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 25.456
TOTAL RAINFALL (mm)= 62.921
RUNOFF COEFFICIENT = 0.405

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50390)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40390):	20.55	1.565	6.08	25.46
+ ID2= 2 (60390):	733.76	26.526	6.50	41.32
ID = 3 (50390):	754.31	27.087	6.50	40.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (40370)	Area (ha)=	17.93			
ID= 1 DT= 5.0 min	Total Imp(%)=	65.98	Dir. Conn.(%)=	52.33	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.83	6.10
Dep. Storage (mm)=	2.00	6.08
Average Slope (%)=	1.50	1.50
Length (m)=	345.74	42.00
Mannings n =	0.015	0.280
Max.Eff.Inten.(mm/hr)=	82.92	78.64
over (min)	5.00	15.00
Storage Coeff. (min)=	5.59 (ii)	14.93 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.20	0.08

		TOTALS
PEAK FLOW (cms)=	2.06	0.77	2.732 (iii)
TIME TO PEAK (hrs)=	6.00	6.08	6.00
RUNOFF VOLUME (mm)=	60.92	33.89	48.03
TOTAL RAINFALL (mm)=	62.92	62.92	62.92
RUNOFF COEFFICIENT =	0.97	0.54	0.76

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(60370)			
IN= 2---> OUT= 1	Routing time step (min)'=	5.00	

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	127.70	0.0450	
18.00	126.87	0.0450	
24.00	125.30	0.0450	
30.00	123.90	0.0450	
36.00	123.14	0.0450	
42.00	123.07	0.0450	
48.00	122.88	0.0450	
54.00	122.90	0.0450	
60.00	122.95	0.0450	
66.00	123.04	0.0450 /0.0350	Main Channel
72.00	122.86	0.0350	Main Channel
78.00	122.98	0.0450	
84.00	122.97	0.0450	
90.00	122.96	0.0450	
96.00	122.92	0.0450	
102.00	123.50	0.0450	
108.00	124.18	0.0450	
120.00	127.45	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	122.98	.275E+03	0.7	0.35	6.78
0.36	123.21	.218E+04	14.7	0.95	2.47
0.59	123.45	.437E+04	44.6	1.44	1.63
0.83	123.68	.670E+04	87.2	1.84	1.28
1.06	123.92	.916E+04	141.6	2.19	1.08
1.30	124.16	.117E+05	208.1	2.51	0.94
1.54	124.39	.144E+05	287.0	2.82	0.84
1.77	124.63	.171E+05	376.7	3.11	0.76
2.01	124.86	.199E+05	476.5	3.38	0.70
2.24	125.10	.228E+05	586.1	3.64	0.65
2.48	125.33	.257E+05	705.6	3.88	0.61
2.71	125.57	.287E+05	835.1	4.12	0.57
2.95	125.80	.317E+05	974.0	4.35	0.54
3.19	126.04	.348E+05	1122.3	4.56	0.52
3.42	126.28	.379E+05	1279.8	4.77	0.49
3.66	126.51	.411E+05	1446.6	4.97	0.47
3.89	126.75	.444E+05	1622.6	5.17	0.46
4.13	126.98	.477E+05	1786.6	5.29	0.45
4.36	127.22	.513E+05	1942.9	5.36	0.44

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (40370)	17.93	2.73	6.00	48.03	0.16	0.38
OUTFLOW: ID= 1 (60370)	17.93	2.23	6.08	48.03	0.15	0.37

ADD HYD (50400)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50390):	754.31	27.087	6.50	40.89
+ ID2= 2 (60370):	17.93	2.231	6.08	48.03
ID = 3 (50400):	772.24	27.879	6.50	41.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60400)			
IN= 2---> OUT= 1	Routing time step (min)'=	5.00	

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	125.01	0.0450	
20.00	123.70	0.0450	
25.00	123.04	0.0450	
30.00	120.84	0.0450	
35.00	119.81	0.0450 /0.0350	Main Channel
40.00	119.74	0.0350	Main Channel
65.00	120.12	0.0450	
90.00	120.58	0.0450	
100.00	125.02	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.07	119.81	.209E+03	0.1	0.27	34.81
0.35	120.09	.326E+04	4.7	0.83	11.50
0.62	120.36	.916E+04	21.3	1.34	7.16
0.90	120.63	.176E+05	51.5	1.68	5.69
1.17	120.91	.270E+05	96.6	2.05	4.67
1.44	121.18	.367E+05	153.8	2.41	3.98
1.72	121.46	.466E+05	222.1	2.74	3.50
1.99	121.73	.567E+05	300.7	3.05	3.14
2.26	122.00	.669E+05	389.1	3.34	2.87
2.54	122.28	.774E+05	487.1	3.62	2.65
2.81	122.55	.880E+05	594.2	3.88	2.47
3.09	122.82	.988E+05	710.4	4.13	2.32
3.36	123.10	.110E+06	834.4	4.36	2.20
3.63	123.37	.121E+06	964.4	4.57	2.10
3.91	123.65	.133E+06	1104.4	4.76	2.01
4.18	123.92	.145E+06	1250.0	4.93	1.94
4.45	124.19	.159E+06	1406.7	5.09	1.88
4.73	124.47	.172E+06	1575.5	5.25	1.82
5.00	124.74	.187E+06	1756.1	5.39	1.77

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50400)	772.24	27.88	6.50	41.05	0.68	1.40
OUTFLOW: ID= 1 (60400)	772.24	27.28	6.58	41.05	0.68	1.39

CALIB					
STANDHYD (40410)	Area (ha)=	7.92			
ID= 1 DT= 5.0 min	Total Imp(%)=	28.60	Dir. Conn.(%)=	25.07	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.26	5.65
Dep. Storage (mm)=	2.00	9.48
Average Slope (%)=	1.10	1.10
Length (m)=	229.75	574.00
Mannings n =	0.015	0.350
Max.Eff.Inten.(mm/hr)=	82.92	15.44
over (min)	5.00	115.00
Storage Coeff. (min)=	4.80 (ii)	112.68 (ii)
Unit Hyd. Tpeak (min)=	5.00	115.00
Unit Hyd. peak (cms)=	0.22	0.01

		TOTALS
PEAK FLOW (cms)=	0.44	0.09	0.453 (iii)
TIME TO PEAK (hrs)=	6.00	7.83	6.00
RUNOFF VOLUME (mm)=	60.92	24.02	33.26
TOTAL RAINFALL (mm)=	62.92	62.92	62.92
RUNOFF COEFFICIENT =	0.97	0.38	0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50410)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40410):	7.92	0.453	6.00	33.26
+ ID2= 2 (60400):	772.24	27.279	6.58	41.05
ID = 3 (50410):	780.16	27.352	6.58	40.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	1.28	Curve Number (CN)=	85.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.25			

Unit Hyd Qpeak (cms)= 0.196

PEAK FLOW (cms)= 0.110 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 33.048
TOTAL RAINFALL (mm)= 62.921
RUNOFF COEFFICIENT = 0.525

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (******)	Area (ha)=	1.24	Curve Number (CN)=	85.0	
ID= 1 DT= 5.0 min	Ia (mm)=	4.48	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.24			

Unit Hyd Qpeak (cms)= 0.197

PEAK FLOW (cms)= 0.110 (i)
TIME TO PEAK (hrs)= 6.083
RUNOFF VOLUME (mm)= 33.043

```
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.12   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

      Unit Hyd Qpeak  (cms)=   0.477

      PEAK FLOW       (cms)=   0.293 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  33.065
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.526

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.12   0.293     6.17    33.07
      + ID2= 2 (******):     1.24   0.110     6.08    33.04
        ================================================
        ID = 3 (******):     5.36   0.398     6.17    33.06

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     5.36   0.398     6.17    33.06
      + ID2= 2 (******):     1.28   0.110     6.08    33.05
        ================================================
        ID = 1 (******):     6.64   0.504     6.17    33.06

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area     (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.95        46.62
      Dep. Storage     (mm)=       2.00         7.70
      Average Slope     (%)=       1.90         1.90
      Length            (m)=     671.17        89.00
      Mannings n            =      0.015        0.240

      Max.Eff.Inten.(mm/hr)=      82.92        39.52
                    over (min)      10.00        25.00
      Storage Coeff.  (min)=       7.76 (ii)   24.14 (ii)
      Unit Hyd. Tpeak (min)=      10.00        25.00
      Unit Hyd. peak  (cms)=       0.13         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       3.31         2.77          5.013 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25           6.08
      RUNOFF VOLUME    (mm)=      60.92        28.18          36.36
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.45           0.58


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40420):    67.57   5.013     6.08    36.36
      + ID2= 2 (******):     6.64   0.504     6.17    33.06
        ================================================
        ID = 3 (******):    74.21   5.504     6.08    36.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50410):   780.16  27.352     6.58    40.97
      + ID2= 2 (******):    74.21   5.504     6.08    36.07
        ================================================
        ID = 3 ( 50420):   854.37  30.088     6.58    40.55

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         121.79        0.0450
                  12.00         116.08        0.0450
                  40.00         115.59    0.0450 /0.0350  Main Channel
                  44.00         114.89        0.0350      Main Channel
                  48.00         114.52        0.0350      Main Channel
                  52.00         115.72    0.0350 /0.0450  Main Channel
                  56.00         115.93        0.0450
                  60.00         117.24        0.0450
                  64.00         119.04        0.0450
                  68.00         120.69        0.0450
                  72.00         121.01        0.0450
                  74.00         121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36   114.88    .645E+03       0.7         0.83       14.38
        0.71   115.23    .236E+04       4.6         1.41        8.47
        1.07   115.59    .489E+04      12.6         1.84        6.48
        1.44   115.96    .112E+05      30.9         1.97        6.04
        1.80   116.33    .227E+05      69.1         2.17        5.49
        2.17   116.70    .351E+05     125.6         2.56        4.65
        2.54   117.06    .479E+05     197.5         2.95        4.04
        2.91   117.43    .612E+05     283.9         3.32        3.59
        3.28   117.80    .749E+05     384.1         3.66        3.25
        3.65   118.17    .891E+05     497.4         3.99        2.99
        4.02   118.54    .104E+06     623.5         4.30        2.77
        4.39   118.91    .119E+06     762.2         4.59        2.60
        4.76   119.28    .134E+06     913.1         4.87        2.45
        5.13   119.65    .150E+06    1076.2         5.13        2.32
        5.49   120.02    .166E+06    1251.7         5.38        2.21
        5.86   120.39    .183E+06    1439.5         5.62        2.12
        6.23   120.75    .200E+06    1634.3         5.84        2.04
        6.60   121.12    .219E+06    1831.3         5.99        1.99
        6.97   121.49    .238E+06    2058.5         6.20        1.92

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420)  854.37    30.09    6.58  40.55      1.42      1.97
   OUTFLOW: ID= 1 ( 60420)  854.37    29.61    6.67  40.55      1.41      1.96


---------------------------------------------------------------------------
--------------------
| STANDHYD ( 40430)|   Area     (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.41        11.03
      Dep. Storage     (mm)=       2.00         7.80
      Average Slope     (%)=       3.50         3.50
      Length            (m)=     465.00       102.00
      Mannings n            =      0.015        0.320

      Max.Eff.Inten.(mm/hr)=      82.92        35.43
                    over (min)       5.00        25.00
      Storage Coeff.  (min)=       5.18 (ii)   23.56 (ii)
      Unit Hyd. Tpeak (min)=       5.00        25.00
      Unit Hyd. peak  (cms)=       0.21         0.05
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.61         0.59          4.941 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
      RUNOFF VOLUME    (mm)=      60.92        26.12          48.39
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.42           0.77


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.3    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40430):    32.43   4.941     6.00    48.39
      + ID2= 2 ( 60420):   854.37  29.609     6.67    40.55
        ================================================
        ID = 3 ( 50420):   886.80  30.325     6.67    40.84

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         116.29        0.0450
                  20.00         114.05        0.0450
                  25.00         110.83        0.0450
                  30.00         109.36        0.0450
                  35.00         108.23    0.0450 /0.0350  Main Channel
                  40.00         107.52        0.0350      Main Channel
                  45.00         108.00    0.0350 /0.0450  Main Channel
                  50.00         107.84        0.0450
                  55.00         108.21        0.0450
                  60.00         108.95        0.0450
                  65.00         109.35        0.0450
                  70.00         109.41        0.0450
                  75.00         109.48        0.0450
                  80.00         109.77        0.0450
                  85.00         112.20        0.0450
                  90.00         115.48        0.0450
                 100.00         116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24   107.76    .285E+03       0.4         0.74       12.74
        0.48   108.00    .146E+04       2.6         1.01        9.32
        0.97   108.49    .695E+04      23.3         1.90        4.97
        1.46   108.97    .141E+05      64.5         2.60        3.63
        1.94   109.46    .233E+05     116.9         2.84        3.33
        2.43   109.95    .371E+05     214.6         3.28        2.88
        2.92   110.44    .519E+05     350.2         3.83        2.47
        3.41   110.92    .675E+05     515.9         4.34        2.18
        3.89   111.41    .836E+05     711.3         4.82        1.96
        4.38   111.90    .100E+06     933.4         5.28        1.79
        4.87   112.39    .117E+06    1182.4         5.71        1.65
        5.35   112.87    .135E+06    1458.0         6.13        1.54
        5.84   113.36    .153E+06    1758.3         6.52        1.45
        6.33   113.85    .171E+06    2082.9         6.90        1.37
        6.82   114.34    .190E+06    2410.6         7.19        1.31
        7.30   114.82    .210E+06    2758.9         7.43        1.27
        7.79   115.31    .232E+06    3143.1         7.68        1.23
        8.28   115.80    .255E+06    3473.3         7.71        1.23
        8.77   116.29    .282E+06    3812.4         7.67        1.23

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50430)  886.80    30.33    6.67  40.84      1.05      1.99
   OUTFLOW: ID= 1 ( 60430)  886.80    30.19    6.67  40.83      1.05      1.99


---------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area     (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      37.70        19.42
      Dep. Storage     (mm)=       2.00         6.60
      Average Slope     (%)=       2.50         2.50
      Length            (m)=     617.06        45.00
      Mannings n            =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        36.09
                    over (min)       5.00        20.00
      Storage Coeff.  (min)=       6.79 (ii)   18.43 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       7.93         1.01          8.603 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      60.92        22.65          47.53
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.36           0.76


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  74.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40440):    57.11   8.603     6.00    47.53
      + ID2= 2 ( 60430):   886.80  30.187     6.67    40.83
        ================================================
        ID = 3 ( 50440):   943.92  31.360     6.67    41.24

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
---------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         104.01        0.0450
                  10.00         103.90        0.0450
```

```
                  20.00        103.74        0.0450
                  30.00        103.66        0.0450
                  40.00        103.60        0.0450
                  50.00        102.52        0.0450
                  60.00        101.16        0.0450
                  70.00        100.60        0.0450
                  80.00        100.17        0.0450
                  90.00         99.85        0.0450
                 100.00         97.89        0.0350      Main Channel
                 110.00         97.62        0.0350      Main Channel
                 120.00         99.12        0.0450
                 130.00         99.16        0.0450
                 140.00         99.36        0.0450
                 150.00         99.66        0.0450
                 160.00         99.68        0.0450
                 180.00         99.76        0.0450
                 190.00        104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.27    97.89    .102E+04        1.2         0.77      13.74
       0.60    98.21    .381E+04        9.4         1.56       6.74
       0.92    98.53    .738E+04       24.3         2.08       5.05
       1.24    98.86    .117E+05       46.2         2.50       4.22
       1.56    99.18    .171E+05       76.6         2.84       3.71
       1.89    99.50    .264E+05      124.5         2.98       3.53
       2.21    99.82    .403E+05      189.1         2.96       3.56
       2.53   100.15    .597E+05      286.1         3.03       3.48
       2.85   100.47    .809E+05      417.7         3.26       3.23
       3.17   100.79    .104E+06      580.2         3.53       2.98
       3.50   101.11    .128E+06      771.7         3.81       2.77
       3.82   101.44    .153E+06      996.3         4.10       2.57
       4.14   101.76    .179E+06     1248.4         4.40       2.40
       4.46   102.08    .206E+06     1526.4         4.68       2.25
       4.79   102.40    .233E+06     1829.8         4.96       2.13
       5.11   102.73    .261E+06     2156.4         5.22       2.02
       5.43   103.05    .290E+06     2507.0         5.47       1.93
       5.75   103.37    .319E+06     2882.7         5.71       1.85
       6.08   103.69    .350E+06     3194.7         5.77       1.83

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440)  943.92    31.36    6.67  41.24      1.02      2.20
   OUTFLOW: ID= 1 ( 60440)  943.92    31.20    6.75  41.24      1.02      2.20



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37         17.02
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       0.80          0.80
     Length            (m)=     450.16        150.00
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=      82.92         18.82
                   over (min)    10.00         55.00
     Storage Coeff.  (min)=       7.91 (ii)    52.59 (ii)
     Unit Hyd. Tpeak (min)=      10.00         55.00
     Unit Hyd. peak  (cms)=       0.13          0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.43          0.49          2.551 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.83          6.00
     RUNOFF VOLUME    (mm)=      60.92         24.75         39.58
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.39          0.63

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40450):    30.40    2.551     6.00    39.58
     + ID2= 2 ( 60440):   943.92   31.199     6.75    41.24
       ================================================
       ID = 3 ( 50450):   974.32   31.926     6.75    41.19

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         97.16        0.0450
                   3.00         96.00        0.0450
                   6.00         95.32        0.0450
                   9.00         94.64        0.0450
                  12.00         94.43        0.0450
                  15.00         94.29        0.0450
                  18.00         94.10        0.0350      Main Channel
                  21.00         94.02        0.0350      Main Channel
                  24.00         93.70        0.0350      Main Channel
                  27.00         94.22    0.0350 /0.0450  Main Channel
                  30.00         94.90        0.0450
                  32.00         95.30        0.0450
                  34.00         95.78        0.0450
                  36.00         96.25        0.0450
                  38.00         96.60        0.0450
                  48.00         97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.13    93.83    .942E+02        0.1         0.39      30.45
       0.27    93.96    .377E+03        0.3         0.62      19.18
       0.40    94.09    .911E+03        0.9         0.69      17.28
       0.59    94.29    .230E+04        3.4         1.06      11.15
       0.78    94.48    .428E+04        7.9         1.32       8.98
       0.97    94.67    .679E+04       14.6         1.53       7.74
       1.16    94.86    .963E+04       23.7         1.75       6.77
       1.35    95.05    .127E+05       34.9         1.96       6.07
       1.54    95.24    .160E+05       48.1         2.14       5.54
       1.73    95.43    .196E+05       63.6         2.31       5.13
       1.92    95.62    .233E+05       81.2         2.48       4.79
       2.11    95.81    .273E+05      101.0         2.63       4.51
       2.30    96.00    .315E+05      123.0         2.78       4.27
       2.49    96.19    .360E+05      147.8         2.93       4.06
       2.68    96.38    .406E+05      174.6         3.07       3.87
       2.87    96.57    .454E+05      203.7         3.20       3.71
       3.06    96.76    .505E+05      232.7         3.28       3.62
       3.25    96.95    .562E+05      264.9         3.36       3.54
       3.44    97.14    .624E+05      300.8         3.43       3.46

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450)  974.32    31.93    6.75  41.19      1.30      1.90
   OUTFLOW: ID= 1 ( 60450)  974.32    31.70    6.75  41.19      1.30      1.89



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36          7.04
     Dep. Storage     (mm)=       2.00          6.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     386.43         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      82.92         69.38
                   over (min)     5.00         15.00
     Storage Coeff.  (min)=       5.19 (ii)    13.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.63          0.81          3.319 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      60.92         27.86         45.33
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.44          0.72

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  72.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40    3.319     6.00    45.33
     + ID2= 2 ( 60450):   974.32   31.700     6.75    41.19
       ================================================
       ID = 3 ( 50460):   996.72   32.078     6.75    41.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         91.61        0.0450
                   3.00         91.57        0.0450
                   6.00         91.15        0.0450
                   9.00         90.70        0.0450
                  12.00         89.72        0.0450
                  15.00         88.86        0.0450
                  18.00         88.38    0.0450 /0.0350  Main Channel
                  21.00         87.96        0.0350      Main Channel
                  24.00         88.18    0.0350 /0.0450  Main Channel
                  26.00         88.19        0.0450
                  28.00         88.30        0.0450
                  30.00         90.32        0.0450
                  32.00         90.49        0.0450
                  34.00         90.80        0.0450
                  36.00         90.85        0.0450
                  38.00         90.97        0.0450
                  40.00         91.15        0.0450
                  42.00         91.29        0.0450
                  44.00         91.40        0.0450
                  46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.11    88.07    .589E+02        0.0         0.34      23.89
       0.21    88.18    .235E+03        0.3         0.54      15.05
       0.41    88.38    .106E+04        1.8         0.85       9.64
       0.61    88.57    .211E+04        5.3         1.22       6.69
       0.81    88.77    .330E+04       10.2         1.51       5.40
       1.01    88.97    .462E+04       16.6         1.76       4.63
       1.21    89.17    .603E+04       24.5         1.99       4.10
       1.41    89.37    .753E+04       33.8         2.19       3.72
       1.61    89.57    .912E+04       44.4         2.38       3.42
       1.81    89.77    .108E+05       56.4         2.56       3.19
       2.00    89.97    .125E+05       69.9         2.72       2.99
       2.20    90.17    .144E+05       84.7         2.88       2.83
       2.40    90.37    .163E+05       99.8         3.00       2.72
       2.60    90.56    .184E+05      114.7         3.04       2.68
       2.80    90.76    .208E+05      132.8         3.13       2.61
       3.00    90.96    .235E+05      148.4         3.09       2.64
       3.20    91.16    .266E+05      170.7         3.13       2.60
       3.40    91.36    .302E+05      194.9         3.16       2.58
       3.60    91.56    .342E+05      223.5         3.20       2.55

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460)  996.72    32.08    6.75  41.28      1.37      2.15
   OUTFLOW: ID= 1 ( 60460)  996.72    32.06    6.83  41.28      1.37      2.15



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      59.53         30.66
     Dep. Storage     (mm)=       2.00          5.90
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     775.42         40.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=      82.92         65.50
                   over (min)    10.00         20.00
     Storage Coeff.  (min)=       9.27 (ii)    19.23 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.12          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       9.04          2.70         10.907 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      60.92         29.18         46.32
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.46          0.74

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40470):    90.19   10.907     6.00    46.32
     + ID2= 2 ( 60460):   996.72   32.064     6.83    41.28
       ================================================
       ID = 3 ( 50470):  1086.91   34.002     6.75    41.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         89.19        0.0450
                   2.00         88.89        0.0450
                   4.00         88.54        0.0450
                   6.00         88.31        0.0450
```

```
                  8.00         88.14        0.0450
                 10.00         88.02        0.0450
                 12.00         87.99        0.0450
                 14.00         87.90        0.0450
                 16.00         87.84        0.0450
                 19.00         87.55        0.0450
                 22.00         86.85        0.0450
                 25.00         86.23        0.0350      Main Channel
                 28.00         86.23        0.0350      Main Channel
                 31.00         86.60        0.0450
                 34.00         87.49        0.0450
                 37.00         88.15        0.0450
                 41.00         88.21        0.0450
                 45.00         88.29        0.0450
                 48.00         88.36        0.0450
                 50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01   86.23    .467E+01        0.0         0.03     307.39
        0.16   86.38    .381E+03        0.3         0.45      22.82
        0.31   86.54    .942E+03        1.0         0.65      15.77
        0.46   86.69    .167E+04        2.3         0.85      12.10
        0.61   86.84    .253E+04        4.2         1.03       9.95
        0.77   86.99    .350E+04        6.7         1.18       8.66
        0.92   87.15    .458E+04        9.8         1.32       7.78
        1.07   87.30    .576E+04       13.5         1.44       7.13
        1.22   87.45    .706E+04       17.7         1.54       6.63
        1.38   87.60    .847E+04       22.5         1.63       6.28
        1.53   87.76    .101E+05       27.8         1.69       6.05
        1.68   87.91    .119E+05       33.3         1.72       5.97
        1.83   88.06    .142E+05       39.8         1.72       5.96
        1.99   88.21    .170E+05       47.4         1.71       5.97
        2.14   88.36    .206E+05       57.3         1.71       5.99
        2.29   88.52    .247E+05       70.7         1.76       5.81
        2.44   88.67    .289E+05       86.1         1.83       5.59
        2.60   88.82    .332E+05      103.2         1.91       5.36
        2.75   88.97    .376E+05      121.7         1.99       5.15

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1086.91    34.00    6.75  41.70      1.70      1.72
   OUTFLOW: ID= 1 ( 60470) 1086.91    33.78    6.83  41.70      1.69      1.72


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--------------------
| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      42.82         13.61
     Dep. Storage     (mm)=       2.00          5.80
     Average Slope     (%)=       1.90          1.90
     Length            (m)=     613.35         40.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=      82.92         99.18
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       7.35 (ii)    14.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.17          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.00          2.21          8.918 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      60.92         35.64         50.55
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.57          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40480):    56.43   8.918     6.00    50.55
     + ID2= 2 ( 60470):  1086.91  33.779     6.83    41.70
       ==========================================================
       ID = 3 ( 50480):  1143.34  34.767     6.83    42.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         86.90        0.0450
                   2.00         86.76        0.0450
                   4.00         85.96        0.0450
                   6.00         85.44        0.0450
                   8.00         84.83        0.0450
                  10.00         84.50        0.0450
                  12.00         84.15        0.0450
                  14.00         83.85        0.0350      Main Channel
                  16.00         83.86        0.0350      Main Channel
                  18.00         83.99    0.0350 /0.0450  Main Channel
                  20.00         84.27        0.0450
                  22.00         84.55        0.0450
                  24.00         84.88        0.0450
                  26.00         85.37        0.0450
                  27.00         85.68        0.0450
                  28.00         85.91        0.0450
                  29.00         86.08        0.0450
                  30.00         86.21        0.0450
                  31.00         86.29        0.0450
                  34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   84.01    .165E+03        0.3         0.48      10.34
        0.32   84.17    .460E+03        1.2         0.77       6.41
        0.48   84.33    .855E+03        2.8         0.98       5.07
        0.64   84.48    .135E+04        5.2         1.14       4.35
        0.80   84.64    .193E+04        8.3         1.28       3.88
        0.95   84.80    .261E+04       12.3         1.40       3.53
        1.11   84.96    .337E+04       17.4         1.53       3.23
        1.27   85.12    .419E+04       23.5         1.66       2.97
        1.43   85.28    .506E+04       30.5         1.79       2.77
        1.59   85.44    .599E+04       38.5         1.90       2.60
        1.75   85.60    .697E+04       47.3         2.01       2.46
        1.91   85.76    .801E+04       57.1         2.12       2.34
        2.07   85.92    .911E+04       67.8         2.21       2.24
        2.23   86.07    .103E+05       79.5         2.30       2.15
        2.39   86.23    .115E+05       91.9         2.37       2.09
        2.54   86.39    .128E+05      105.7         2.45       2.02
        2.70   86.55    .142E+05      121.2         2.53       1.95
        2.86   86.71    .156E+05      138.0         2.62       1.89
        3.02   86.87    .171E+05      153.0         2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1143.34    34.77    6.83  42.13      1.52      1.85
   OUTFLOW: ID= 1 ( 60480) 1143.34    34.74    6.83  42.13      1.52      1.85


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--------------------
| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60          4.16
     Dep. Storage     (mm)=       2.00          6.22
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     334.28         53.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=      82.92         85.28
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       5.59 (ii)    15.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.20          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.23          0.56          2.627 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      60.92         34.25         50.36
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.54          0.80

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40490):    16.76   2.627     6.00    50.36
     + ID2= 2 ( 60480):  1143.34  34.743     6.83    42.13
       ==========================================================
       ID = 3 ( 50490):  1160.10  35.663     6.25    42.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         85.84        0.0450
                   6.00         84.32        0.0450
                  12.00         84.21        0.0450
                  18.00         84.12        0.0450
                  24.00         84.08        0.0450
                  30.00         84.10        0.0450
                  36.00         84.03        0.0450
                  42.00         83.92        0.0450
                  48.00         83.88        0.0450
                  54.00         82.88        0.0350      Main Channel
                  60.00         83.12    0.0350 /0.0450  Main Channel
                  64.00         83.65        0.0450
                  68.00         83.60        0.0450
                  72.00         83.67        0.0450
                  76.00         83.70        0.0450
                  80.00         83.82        0.0450
                  84.00         83.90        0.0450
                  88.00         84.05        0.0450
                  92.00         84.16        0.0450
                 100.00         85.83        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   83.04    .332E+03        0.1         0.32      46.08
        0.31   83.19    .129E+04        0.8         0.57      26.14
        0.47   83.35    .259E+04        2.3         0.79      18.75
        0.62   83.50    .418E+04        4.5         0.96      15.43
        0.78   83.66    .626E+04        7.3         1.04      14.28
        0.93   83.81    .101E+05       11.9         1.05      14.10
        1.09   83.97    .153E+05       17.6         1.02      14.55
        1.24   84.13    .231E+05       26.2         1.00      14.73
        1.40   84.28    .341E+05       41.2         1.07      13.79
        1.55   84.44    .460E+05       61.7         1.19      12.44
        1.71   84.59    .582E+05       86.6         1.32      11.21
        1.86   84.75    .706E+05      115.2         1.45      10.21
        2.02   84.90    .831E+05      147.5         1.57       9.39
        2.17   85.06    .959E+05      183.2         1.70       8.72
        2.33   85.21    .109E+06      222.2         1.81       8.16
        2.48   85.37    .122E+06      264.5         1.93       7.68
        2.64   85.52    .135E+06      310.0         2.03       7.27
        2.79   85.68    .149E+06      358.5         2.14       6.91
        2.95   85.83    .162E+06      410.1         2.24       6.60

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50490) 1160.10    35.66    6.25  42.25      1.34      1.05
   OUTFLOW: ID= 1 ( 60490) 1160.10    34.53    7.00  42.25      1.32      1.04


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92          4.72
     Dep. Storage     (mm)=       2.00          5.43
     Average Slope     (%)=       2.10          2.10
     Length            (m)=     370.92         40.00
     Mannings n           =      0.015         0.260

     Max.Eff.Inten.(mm/hr)=      82.92         98.59
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.27 (ii)    12.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.80          0.82          3.520 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      60.92         35.62         51.11
     TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
     RUNOFF COEFFICIENT   =       0.97          0.57          0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40810):    20.64   3.520     6.00    51.11
     + ID2= 2 ( 60490):  1160.10  34.526     7.00    42.25
       ==========================================================
       ID = 3 ( 50810):  1180.73  34.818     7.00    42.41

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52          6.81
```

```
      Dep. Storage     (mm)=       2.00         9.76
      Average Slope     (%)=       3.20         3.20
      Length            (m)=     249.31        47.00
      Mannings n           =      0.015        0.350

      Max.Eff.Inten.(mm/hr)=      82.92        42.89
                    over (min)        5.00        20.00
      Storage Coeff.  (min)=       3.66 (ii)   15.25 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.25         0.07
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.37         0.46          0.678 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
      RUNOFF VOLUME    (mm)=      60.92        24.07          30.51
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.38           0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40500):     9.32   0.678     6.00    30.51
      + ID2= 2 ( 50810):  1180.73  34.818     7.00    42.41
        ====================================================
        ID = 3 ( 50500):  1190.06  34.943     7.00    42.31

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.154

      PEAK FLOW       (cms)=   0.085 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  33.037
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.89         0.04
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.40         1.00
      Length            (m)=     115.50         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      82.92        54.89
                    over (min)        5.00         5.00
      Storage Coeff.  (min)=       3.95 (ii)    3.95 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.24         0.24
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.88         0.01          0.889 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      60.92        33.07          60.64
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.53           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.45         0.00
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.40         1.00
      Length            (m)=      48.30         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=      82.92        54.89
                    over (min)        5.00         5.00
      Storage Coeff.  (min)=       2.34 (ii)    2.34 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.30         0.30
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.10         0.00          0.103 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      60.92        33.07          60.64
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.53           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      13.25        13.25
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       2.00         2.00
      Length            (m)=     420.00        30.00
      Mannings n           =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=      82.92        88.36
                    over (min)        5.00        10.00
      Storage Coeff.  (min)=       5.29 (ii)    7.26 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.21         0.14
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.76         2.66          4.416 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      60.92        38.88          45.49
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.62           0.72


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    1.8600      0.9862
                          0.0560      0.3250   |    2.1000      1.0580
                          0.2600      0.4718   |    2.2000      1.2000
                          0.7400      0.6512   |   10.0000      1.2500
                          1.4100      0.8427   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.500      4.416      6.00      45.49
   OUTFLOW: ID= 1 (******)     26.500      0.870      6.42      45.44
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.70
                  TIME SHIFT OF PEAK FLOW          (min)= 25.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6885

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  --------------------------
  | Junction Command(30651006) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651003)    0.00     0.00    0.00      0.00
  OUTFLOW: ID= 2(30651006)    0.00     0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    26.50   0.870     6.42    45.44
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 3 (******):    26.50   0.870     6.42    45.44

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    26.50   0.870     6.42    45.44
      + ID2= 2 (******):     0.93   0.085     6.08    33.04
        ====================================================
        ID = 1 (******):    27.43   0.917     6.33    45.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    27.43   0.917     6.33    45.02
      + ID2= 2 (******):     3.93   0.889     6.00    60.64
        ====================================================
        ID = 3 (******):    31.36   1.279     6.00    46.97

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    31.36   1.279     6.00    46.97
      + ID2= 2 (******):     0.45   0.103     6.00    60.64
        ====================================================
        ID = 1 (******):    31.81   1.382     6.00    47.17

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

      Unit Hyd Qpeak  (cms)=   1.241

      PEAK FLOW       (cms)=   0.835 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  33.072
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.526

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62   0.835     6.33    33.07
      + ID2= 2 (******):    31.81   1.382     6.00    47.17
        ====================================================
        ID = 3 (******):    46.43   1.894     6.33    42.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         443.75         0.0450
                  8.50         443.74         0.0450
                 35.47         443.64         0.0450
                 64.60         443.29         0.0450
                 74.71         443.18         0.0450
                 80.25         443.17         0.0450
                112.17         443.12    0.0450 /0.0350  Main Channel
                131.57         442.76         0.0350      Main Channel
                137.50         442.66         0.0350      Main Channel
                137.91         442.67         0.0350      Main Channel
                152.28         442.24         0.0350      Main Channel
                167.40         441.39         0.0350      Main Channel
                178.29         441.56         0.0350      Main Channel
                216.75         442.01         0.0350      Main Channel
                221.54         442.05    0.0350 /0.0450  Main Channel
                334.66         442.50         0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.05   441.45    .114E+03       0.0         0.27      55.89
        0.11   441.50    .457E+03       0.2         0.43      35.21
        0.16   441.56    .103E+04       0.6         0.57      26.87
        0.22   441.61    .185E+04       1.4         0.67      22.84
        0.27   441.67    .297E+04       2.5         0.77      19.84
        0.33   441.72    .437E+04       4.1         0.87      17.59
        0.38   441.78    .605E+04       6.4         0.96      15.85
        0.44   441.83    .802E+04       9.2         1.05      14.47
        0.49   441.89    .103E+05      12.8         1.14      13.35
```

```
        0.55   441.94    .128E+05      17.2          1.23      12.42
        0.60   442.00    .157E+05      22.4          1.31      11.63
        0.66   442.05    .188E+05      28.3          1.38      11.07
        0.71   442.11    .225E+05      36.9          1.50      10.16
        0.78   442.17    .277E+05      48.4          1.60       9.54
        0.84   442.24    .339E+05      61.9          1.67       9.13
        0.91   442.30    .412E+05      77.1          1.71       8.90
        0.97   442.36    .495E+05      94.7          1.75       8.71
        1.03   442.43    .589E+05     114.9          1.79       8.54
        1.10   442.49    .693E+05     137.9          1.82       8.38

                                          <---- hydrograph ---->   <-pipe / channel->
                                 AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                 (ha)     (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    46.43      1.89     6.33   42.73       0.25      0.71
    OUTFLOW: ID= 1 (******)    46.43      1.65     6.58   42.73       0.23      0.69


--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53

                            AREA     QPEAK     TPEAK     R.V.
                            (ha)     (cms)     (hrs)     (mm)
      TOTAL HYD.(ID= 1):  46.43      1.65      6.58    42.73
      ================================================
      ID= 2  (   2)    :  41.38      0.99      6.58    42.73
      ID= 3  (   2)    :   5.05      0.66      6.58    42.73
      ID= 4  (   2)    :   0.00      0.00      0.00     0.00
      ID= 5  (   2)    :   0.00      0.00      0.00     0.00
      ID= 6  (   2)    :   0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        443.75        0.0000
                  8.50        443.74        0.0450
                 35.47        443.64        0.0450
                 64.60        443.29        0.0450
                 74.71        443.18        0.0450
                 80.25        443.17        0.0450
                112.17        443.12     0.0450 /0.0350  Main Channel
                131.57        442.76        0.0350       Main Channel
                137.50        442.66        0.0350       Main Channel
                137.91        442.67        0.0350       Main Channel
                152.28        442.24        0.0350       Main Channel
                167.40        441.39        0.0350       Main Channel
                178.29        441.56        0.0350       Main Channel
                216.75        442.01        0.0350       Main Channel
                221.54        442.05     0.0350 /0.0450  Main Channel
                334.66        442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.05   441.45    .128E+03       0.0          0.29      60.12
        0.11   441.50    .514E+03       0.2          0.45      37.87
        0.16   441.56    .116E+04       0.7          0.59      28.90
        0.22   441.61    .208E+04       1.4          0.70      24.57
        0.27   441.67    .333E+04       2.6          0.80      21.34
        0.33   441.72    .490E+04       4.3          0.91      18.92
        0.38   441.78    .680E+04       6.6          1.01      17.05
        0.44   441.83    .901E+04       9.6          1.10      15.57
        0.49   441.89    .115E+05      13.4          1.19      14.36
        0.55   441.94    .144E+05      18.0          1.28      13.36
        0.60   442.00    .176E+05      23.4          1.37      12.51
        0.66   442.05    .211E+05      29.5          1.44      11.91
        0.71   442.11    .253E+05      38.5          1.57      10.93
        0.78   442.17    .311E+05      50.5          1.67      10.26
        0.84   442.24    .381E+05      64.7          1.74       9.82
        0.91   442.30    .463E+05      80.5          1.79       9.57
        0.97   442.36    .556E+05      98.9          1.83       9.37
        1.03   442.43    .661E+05     120.0          1.86       9.19
        1.10   442.49    .779E+05     144.1          1.90       9.01

                                          <---- hydrograph ---->   <-pipe / channel->
                                 AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                 (ha)     (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    41.38      0.99     6.58   42.73       0.19      0.63
    OUTFLOW: ID= 1 (******)    41.38      0.94     7.33   42.72       0.18      0.63


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.238 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  33.072
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA     QPEAK     TPEAK      R.V.
--------------------         (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (******):     4.24    0.238      6.33     33.07
      + ID2= 2 (******):    41.38    0.935      7.33     42.72
        ================================================
        ID = 3 (******):    45.62    1.049      6.83     41.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.201 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.059
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA     QPEAK     TPEAK      R.V.
--------------------         (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (******):     2.59    0.201      6.17     33.06
      + ID2= 2 (******):    45.62    1.049      6.83     41.83
        ================================================
        ID = 3 (******):    48.21    1.128      6.58     41.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        429.12        0.0500
                 37.54        428.86        0.0500
                 53.31        428.70        0.0500
                 81.17        428.24        0.0500
                 99.28        428.15     0.0500 /0.0300  Main Channel
                114.53        427.72        0.0300       Main Channel
                119.88        426.51        0.0300       Main Channel
                124.17        425.84        0.0300       Main Channel
                206.01        425.90        0.0300       Main Channel
                209.64        426.51        0.0300       Main Channel
                214.21        426.89        0.0300       Main Channel
                231.49        427.17        0.0300       Main Channel
                268.61        427.89     0.0300 /0.0500  Main Channel
                351.58        428.15        0.0500
                368.27        428.31        0.0500
                405.75        428.52        0.0500
                416.79        428.59        0.0500
                440.06        428.76        0.0500
                469.88        428.97        0.0500

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   426.00    .187E+04       9.2          0.88       3.40
        0.31   426.16    .424E+04      35.4          1.49       2.00
        0.47   426.32    .666E+04      74.1          1.98       1.50
        0.63   426.47    .914E+04     123.7          2.41       1.23
        0.79   426.63    .117E+05     182.8          2.79       1.07
        0.94   426.79    .143E+05     251.2          3.13       0.95
        1.10   426.95    .170E+05     323.1          3.39       0.88
        1.26   427.10    .199E+05     394.0          3.52       0.84
        1.42   427.26    .232E+05     479.1          3.69       0.81
        1.57   427.42    .267E+05     577.3          3.86       0.77
        1.73   427.58    .304E+05     687.4          4.03       0.74
        1.89   427.73    .344E+05     808.6          4.20       0.71
        2.05   427.89    .387E+05     927.4          4.28       0.70
        2.23   428.07    .449E+05    1119.2          4.45       0.67
        2.41   428.25    .531E+05    1356.2          4.56       0.65
        2.59   428.43    .627E+05    1638.9          4.66       0.64
        2.77   428.61    .737E+05    1955.8          4.73       0.63
        2.95   428.79    .859E+05    2310.2          4.79       0.62
        3.13   428.97    .996E+05    2701.5          4.84       0.61

                                          <---- hydrograph ---->   <-pipe / channel->
                                 AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                 (ha)     (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    48.21      1.13     6.58   41.36       0.02      0.88
    OUTFLOW: ID= 1 (******)    48.21      1.13     6.67   41.36       0.02      0.88


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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.045 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  32.997
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.524

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  11.13   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.42

     Unit Hyd Qpeak  (cms)=   1.012

     PEAK FLOW       (cms)=   0.665 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  33.071
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.526

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.070 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.030
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area     (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------

                                 IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       54.14         24.23
     Dep. Storage     (mm)=        2.00          5.78
     Average Slope     (%)=        1.20          1.20
     Length            (m)=      722.82         47.00
     Mannings n             =     0.015         0.260

     Max.Eff.Inten.(mm/hr)=       82.92         71.76
                   over (min)     10.00         20.00
     Storage Coeff.  (min)=        9.31 (ii)    19.90 (ii)
     Unit Hyd. Tpeak (min)=       10.00         20.00
     Unit Hyd. peak  (cms)=        0.12          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=        8.17          2.47       9.899 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.17        6.00
     RUNOFF VOLUME    (mm)=       60.92         32.51       48.49
     TOTAL RAINFALL   (mm)=       62.92         62.92       62.92
     RUNOFF COEFFICIENT   =        0.97          0.52        0.77

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
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```
                Distance      Elevation       Manning
                    0.00         144.07        0.0450
                    9.00         143.84        0.0450
                   12.00         142.90        0.0450
                   15.00         142.48        0.0450
                   18.00         142.43    0.0450 /0.0350  Main Channel
                   21.00         142.31        0.0350      Main Channel
                   24.00         142.12        0.0350      Main Channel
                   27.00         142.44    0.0350 /0.0450  Main Channel
                   30.00         142.71        0.0450
                   33.00         143.18        0.0450
                   36.00         143.27        0.0450
                   37.00         143.36        0.0450
                   38.00         143.64        0.0450
                   39.00         143.92        0.0450
                   40.00         143.93        0.0450
                   45.00         144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08  142.20    .282E+02       0.0         0.24      26.26
        0.16  142.27    .113E+03       0.1         0.38      16.54
        0.23  142.35    .257E+03       0.3         0.48      13.09
        0.31  142.43    .477E+03       0.7         0.57      11.02
        0.42  142.54    .969E+03       2.0         0.76       8.24
        0.53  142.65    .157E+04       3.8         0.92       6.80
        0.64  142.76    .224E+04       6.3         1.06       5.90
        0.75  142.87    .299E+04       9.5         1.19       5.26
        0.86  142.98    .379E+04      13.2         1.31       4.77
        0.97  143.09    .463E+04      17.6         1.43       4.37
        1.08  143.20    .552E+04      22.5         1.53       4.09
        1.19  143.31    .653E+04      27.9         1.60       3.90
        1.30  143.42    .761E+04      34.4         1.70       3.69
        1.41  143.53    .874E+04      41.7         1.79       3.49
        1.52  143.64    .989E+04      49.7         1.89       3.32
        1.63  143.75    .111E+05      58.3         1.98       3.17
        1.74  143.85    .123E+05      66.9         2.04       3.06
        1.85  143.96    .137E+05      73.2         2.01       3.11
        1.96  144.07    .153E+05      81.5         2.00       3.13

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 40600)   78.37     9.90    6.00  48.49       0.76      1.20
    OUTFLOW: ID= 1 ( 60600)   78.37     9.47    6.08  48.49       0.75      1.19



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--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area    (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75         2.18
     Dep. Storage     (mm)=       2.00         8.00
     Average Slope     (%)=       2.90         2.90
     Length            (m)=     162.03        40.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=      82.92        56.09
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.91 (ii)   12.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.29         0.21          0.462 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      60.92        26.89          37.65
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.43           0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40610):     3.94   0.462     6.00    37.65
     + ID2= 2 ( 60600):    78.37   9.475     6.08    48.49
       ================================================
       ID = 3 ( 50600):    82.31   9.764     6.08    47.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         143.40        0.0450
                   2.00         142.92        0.0450
                   4.00         142.14        0.0450
                   6.00         141.49        0.0450
                   8.00         141.11        0.0450
                  10.00         141.00    0.0450 /0.0350  Main Channel
                  12.00         140.98        0.0350      Main Channel
                  14.00         140.82        0.0350      Main Channel
                  16.00         141.02    0.0350 /0.0450  Main Channel
                  18.00         141.19        0.0450
                  20.00         141.19        0.0450
                  22.00         141.44        0.0450
                  24.00         142.00        0.0450
                  26.00         142.20        0.0450
                  28.00         142.39        0.0450
                  30.00         142.96        0.0450
                  31.00         143.13        0.0450
                  32.00         143.28        0.0450
                  33.00         143.41        0.0450
                  34.00         143.44        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  140.91    .314E+02       0.0         0.24      23.12
        0.18  141.00    .132E+03       0.1         0.31      17.83
        0.33  141.14    .502E+03       0.9         0.58       9.54
        0.47  141.29    .107E+04       2.4         0.74       7.47
        0.61  141.43    .175E+04       4.7         0.89       6.20
        0.75  141.57    .251E+04       7.9         1.05       5.31
        0.89  141.71    .332E+04      11.8         1.19       4.68
        1.03  141.85    .416E+04      16.5         1.32       4.21
        1.17  141.99    .506E+04      21.8         1.44       3.86
        1.31  142.13    .601E+04      27.5         1.52       3.64
        1.45  142.27    .705E+04      34.0         1.61       3.46
        1.59  142.41    .818E+04      41.5         1.69       3.29
        1.73  142.55    .936E+04      50.2         1.79       3.11
        1.88  142.69    .106E+05      59.8         1.88       2.95
        2.02  142.84    .118E+05      70.2         1.97       2.81
        2.16  142.98    .132E+05      81.2         2.06       2.70
        2.30  143.12    .145E+05      92.6         2.12       2.61
        2.44  143.26    .159E+05     104.8         2.19       2.54
        2.58  143.40    .174E+05     117.7         2.24       2.47

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50600)   82.31     9.76    6.08  47.97       0.82      1.11
    OUTFLOW: ID= 1 ( 60610)   82.31     9.21    6.17  47.97       0.80      1.09



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| CALIB            |
| STANDHYD ( 40620)|   Area    (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30         1.37
     Dep. Storage     (mm)=       2.00         5.59
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     194.41        43.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      82.92        93.49
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.96 (ii)   12.60 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.24         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.78         0.22          0.976 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      60.92        35.04          50.74
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.56           0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40620):     5.67   0.976     6.00    50.74
     + ID2= 2 ( 60610):    82.31   9.210     6.17    47.97
       ================================================
       ID = 3 ( 50610):    87.98   9.582     6.17    48.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         142.03        0.0450
                   1.00         141.71        0.0450
                   2.00         141.35        0.0450
                   3.00         141.01        0.0450
                   4.00         140.79        0.0450
                   5.00         140.56        0.0450
                   6.00         140.44        0.0450
                   7.00         140.30    0.0450 /0.0350  Main Channel
                   8.00         140.08        0.0350      Main Channel
                   9.00         139.88        0.0350      Main Channel
                  10.00         139.97        0.0350      Main Channel
                  11.00         140.12        0.0350      Main Channel
                  12.00         140.35    0.0350 /0.0450  Main Channel
                  13.00         140.52        0.0450
                  14.00         140.73        0.0450
                  15.00         140.97        0.0450
                  16.00         141.27        0.0450
                  17.00         141.57        0.0450
                  18.00         141.89        0.0450
                  19.00         142.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  139.99    .161E+02       0.0         0.36       8.21
        0.21  140.09    .579E+02       0.2         0.59       5.04
        0.31  140.19    .120E+03       0.5         0.78       3.79
        0.42  140.30    .200E+03       1.1         0.95       3.12
        0.53  140.41    .313E+03       2.1         1.18       2.51
        0.65  140.53    .456E+03       3.5         1.36       2.18
        0.76  140.65    .630E+03       5.3         1.50       1.98
        0.88  140.76    .826E+03       7.6         1.63       1.82
        0.99  140.88    .104E+04      10.3         1.75       1.69
        1.11  140.99    .128E+04      13.4         1.87       1.59
        1.23  141.11    .154E+04      17.1         1.98       1.50
        1.34  141.22    .180E+04      21.2         2.09       1.42
        1.46  141.34    .209E+04      25.8         2.20       1.35
        1.57  141.45    .239E+04      30.9         2.30       1.29
        1.69  141.57    .270E+04      36.4         2.40       1.24
        1.80  141.69    .303E+04      42.4         2.49       1.19
        1.92  141.80    .337E+04      48.9         2.58       1.15
        2.04  141.92    .373E+04      55.9         2.67       1.11
        2.15  142.03    .411E+04      63.2         2.74       1.08

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50610)   87.98     9.58    6.17  48.15       0.96      1.72
    OUTFLOW: ID= 1 ( 60620)   87.98     9.58    6.17  48.15       0.97      1.72



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--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=      82.92        51.39
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       2.84 (ii)   15.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.28         0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15         0.10          0.224 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      60.92        27.46          38.03
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.44           0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40640):     2.13   0.224     6.00    38.03
     + ID2= 2 ( 60620):    87.98   9.585     6.17    48.15
       ================================================
       ID = 3 ( 50630):    90.11   9.710     6.17    47.91

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
```

```
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=      82.92        68.68
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       5.95 (ii)   15.79 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.19         0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.36         0.75        2.891 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17         6.00
     RUNOFF VOLUME    (mm)=      60.92        31.47        46.98
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.50         0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40630):    20.54   2.891     6.00    46.98
      + ID2= 2 ( 50630):    90.11   9.710     6.17    47.91
        ================================================
        ID = 3 ( 50640):   110.65  11.180     6.17    47.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.4010      4.4390
                          0.0530      0.4910   |    4.8380      5.5060
                          0.0890      0.7040   |    5.8470      5.5380
                          0.2040      1.0890   |    6.5980      5.9190
                          0.3240      1.4800   |    7.2560      6.2250
                          0.3890      1.7490   |    7.9030      6.4820
                          0.4470      1.9970   |    8.4910      6.6820
                          0.5090      2.3490   |   12.0680      7.1150
                          0.7420      2.9150   |   20.0000      7.2000
                          1.7580      3.6690   |    0.0000      0.0000

                             AREA     QPEAK     TPEAK       R.V.
                             (ha)     (cms)     (hrs)       (mm)
  INFLOW : ID= 2 ( 50640)    110.646     11.180      6.17      47.74
  OUTFLOW: ID= 1 (******)    110.646      1.526      7.42      47.70
  OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.65
                TIME SHIFT OF PEAK FLOW          (min)= 75.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  3.4976

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30651005) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651005)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):   110.65   1.526     7.42    47.70
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):   110.65   1.526     7.42    47.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):   110.65   1.526     7.42    47.70
      + ID2= 2 (******):     0.75   0.070     6.08    33.03
        ================================================
        ID = 1 (******):   111.40   1.533     7.42    47.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   0.665     6.25    33.07
      + ID2= 2 (******):   111.40   1.533     7.42    47.61
        ================================================
        ID = 3 (******):   122.53   1.756     7.00    46.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         447.10        0.0450
                 42.83         446.80        0.0450
                 42.89         446.80        0.0450
                 43.24         446.79        0.0450
                122.57         446.48        0.0450
                154.02         446.22        0.0450
                191.79         446.32    0.0450 /0.0350  Main Channel
                199.05         442.27        0.0350      Main Channel
                199.74         442.33        0.0350      Main Channel
                212.02         444.19        0.0350      Main Channel
                232.17         444.54    0.0350 /0.0450  Main Channel
                348.58         444.42        0.0450
                359.23         444.30        0.0450
                381.33         444.03        0.0450
                483.65         444.18        0.0450
                548.64         445.87        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.19   442.46    .184E+03       0.1         0.65       24.29
       0.38   442.65    .662E+03       0.7         1.01       15.64
       0.57   442.84    .143E+04       2.0         1.31       12.09
       0.76   443.03    .247E+04       4.1         1.57       10.05
       0.95   443.22    .381E+04       7.3         1.81        8.70
       1.14   443.41    .543E+04      11.7         2.04        7.73
       1.33   443.60    .733E+04      17.5         2.26        6.99
       1.52   443.79    .952E+04      24.8         2.46        6.41
       1.71   443.98    .120E+05      33.7         2.66        5.93
       1.89   444.16    .211E+05      47.0         2.11        7.49
       2.08   444.35    .469E+05      73.0         1.47       10.71
       2.27   444.54    .855E+05     117.6         1.30       12.12
       2.46   444.73    .140E+06     240.0         1.62        9.75
       2.65   444.92    .197E+06     400.4         1.92        8.20
       2.84   445.11    .255E+06     595.0         2.21        7.13
       3.03   445.30    .314E+06     821.8         2.48        6.37
       3.22   445.49    .374E+06    1079.2         2.73        5.78
       3.41   445.68    .436E+06    1366.3         2.96        5.32
       3.60   445.87    .500E+06    1682.3         3.19        4.95

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)  122.53     1.76    7.00  46.29      0.54      1.24
   OUTFLOW: ID= 1 (******)  122.53     1.73    7.17  46.28      0.53      1.24

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.174

     PEAK FLOW       (cms)=   0.096 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.037
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.10   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.097 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  33.043
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.99
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.50         1.50
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00        20.00
     Length            (m)=      15.00        15.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      82.92       140.88
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.88 (ii)    3.42 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.26
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.01         0.59         0.592 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=      60.92        45.29        45.44
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.72         0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=  17.55
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      14.39         3.16
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=      82.92       252.96
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.34 (ii)    2.49 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.29
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.66         2.23         3.890 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=      60.92        51.19        55.18
     TOTAL RAINFALL   (mm)=      62.92        62.92        62.92
     RUNOFF COEFFICIENT   =       0.97         0.81         0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.05   0.096     6.08    33.04
      + ID2= 2 (******):     1.10   0.097     6.08    33.04
        ================================================
        ID = 3 (******):     2.15   0.193     6.08    33.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.15   0.193     6.08    33.04
      + ID2= 2 (******):    17.55   3.890     6.00    55.18
        ================================================
        ID = 1 (******):    19.70   4.059     6.00    52.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
```

```
                    (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (******):    19.70   4.059     6.00    52.76
      + ID2= 2 (******):     2.99   0.592     6.00    45.44
        ================================================
        ID = 3 (******):    22.69   4.651     6.00    51.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    22.69   4.651     6.00    51.80
      + ID2= 2 (******):     0.31   0.194     6.00    52.40
        ================================================
        ID = 1 (******):    23.00   4.845     6.00    51.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    23.00   4.845     6.00    51.81
      + ID2= 2 (******):     0.66   0.432     6.00    55.18
        ================================================
        ID = 3 (******):    23.65   5.277     6.00    51.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    0.3352      3.1110
                         0.0933      0.5687   |    0.3714      3.8158
                         0.1848      1.1636   |    0.4043      4.5492
                         0.2439      1.7854   |    0.4445      5.5626
                         0.2910      2.4344   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)    23.655     5.277     6.00      51.90
   OUTFLOW: ID= 1 (******)    23.655     0.151     8.08      51.84
   OVERFLOW:ID= 3 (  0003)     0.000     0.000     0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.86
                  TIME SHIFT OF PEAK FLOW         (min)=125.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.9441
--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(30651004) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    23.65   0.151     8.08    51.84
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    23.65   0.151     8.08    51.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    23.65   0.151     8.08    51.84
      + ID2= 2 (******):     0.45   0.045     6.08    33.00
        ================================================
        ID = 1 (******):    24.10   0.170     6.08    51.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    24.10   0.170     6.08    51.48
      + ID2= 2 (******):   122.53   1.733     7.17    46.28
        ================================================
        ID = 3 (******):   146.63   1.884     7.17    47.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.19   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.177 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  33.054
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.525

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.19   0.177     6.17    33.05
      + ID2= 2 (******):   146.63   1.884     7.17    47.14
        ================================================
        ID = 3 (******):   148.82   1.911     7.17    46.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        429.12        0.0450
                  37.54        428.86        0.0450
                  53.31        428.70        0.0450
                  81.17        428.24        0.0450
                  99.28        428.15    0.0450 /0.0350  Main Channel
                 114.53        427.72        0.0350      Main Channel
                 119.88        426.51        0.0350      Main Channel
                 124.17        425.84        0.0350      Main Channel
                 206.01        425.90        0.0350      Main Channel
                 209.64        426.51        0.0350      Main Channel
                 214.21        426.89        0.0350      Main Channel
                 231.49        427.17        0.0350      Main Channel
                 268.61        427.89    0.0350 /0.0450  Main Channel
                 351.58        428.15        0.0450
                 368.27        428.31        0.0450
                 405.75        428.52        0.0450
                 416.79        428.59        0.0450
                 440.06        428.76        0.0450
                 469.88        428.97        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.16  426.00    .218E+04       4.1         0.39       8.87
        0.31  426.16    .495E+04      15.8         0.67       5.22
        0.47  426.32    .779E+04      33.2         0.89       3.92
        0.63  426.47    .107E+05      55.4         1.08       3.22
        0.79  426.63    .137E+05      81.8         1.25       2.78
        0.94  426.79    .167E+05     112.4         1.40       2.48
        1.10  426.95    .199E+05     144.6         1.52       2.29
        1.26  427.10    .233E+05     176.4         1.58       2.20
        1.42  427.26    .271E+05     214.5         1.65       2.11
        1.57  427.42    .312E+05     258.4         1.73       2.01
        1.73  427.58    .356E+05     307.7         1.81       1.93
        1.89  427.73    .402E+05     362.0         1.88       1.85
        2.05  427.89    .452E+05     415.1         1.91       1.82
        2.23  428.07    .525E+05     501.3         1.99       1.74
        2.41  428.25    .621E+05     609.1         2.05       1.70
        2.59  428.43    .733E+05     739.1         2.10       1.65
        2.77  428.61    .862E+05     886.8         2.15       1.62
        2.95  428.79    .101E+06    1053.9         2.19       1.59
        3.13  428.97    .116E+06    1240.2         2.22       1.57

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)      148.82     1.91    7.17   46.93      0.07      0.39
   OUTFLOW: ID= 1 (******)      148.82     1.89    7.33   46.93      0.07      0.39


--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    148.82   1.893     7.33    46.93
      + ID2= 2 (******):     48.21   1.126     6.67    41.36
        ================================================
        ID = 3 (******):    197.03   2.944     7.25    45.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.024 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.923
     TOTAL RAINFALL   (mm)=  62.921
     RUNOFF COEFFICIENT   =   0.523

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.024     6.00    32.92
      + ID2= 2 (******):     5.05   0.657     6.58    42.73
        ================================================
        ID = 3 (******):     5.27   0.661     6.58    42.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        433.07        0.0450
                  59.66        432.39        0.0450
                  94.25        432.03        0.0450
                 115.71        431.82        0.0450
                 143.84        431.84    0.0450 /0.0350  Main Channel
                 163.59        431.75        0.0350      Main Channel
                 177.84        431.73        0.0350      Main Channel
                 199.51        431.70        0.0350      Main Channel
                 231.74        431.53        0.0350      Main Channel
                 283.71        431.44        0.0350      Main Channel
                 294.09        431.43        0.0350      Main Channel
                 325.65        431.42        0.0350      Main Channel
                 355.24        431.24        0.0350      Main Channel
                 383.70        431.43        0.0350      Main Channel
                 476.17        432.06    0.0350 /0.0450  Main Channel
                 510.88        432.23        0.0450
                 558.61        432.37        0.0450
                 589.84        432.57        0.0450
                 622.97        432.73        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.08  431.32    .108E+03       0.3         0.30       6.68
        0.15  431.39    .434E+03       1.7         0.47       4.21
        0.23  431.47    .119E+04       5.0         0.50       3.99
        0.30  431.54    .252E+04      13.9         0.66       3.02
        0.38  431.62    .417E+04      29.3         0.84       2.37
        0.45  431.69    .604E+04      50.1         0.99       2.01
        0.53  431.77    .828E+04      73.9         1.06       1.87
        0.60  431.84    .109E+05     108.8         1.19       1.67
        0.68  431.92    .142E+05     159.5         1.34       1.48
        0.76  432.01    .176E+05     219.4         1.48       1.34
        0.84  432.09    .213E+05     290.0         1.62       1.22
        0.92  432.17    .252E+05     374.6         1.77       1.12
        1.01  432.25    .293E+05     469.2         1.91       1.04
        1.09  432.33    .338E+05     573.9         2.02       0.98
        1.17  432.41    .386E+05     689.9         2.13       0.93
        1.25  432.49    .435E+05     817.2         2.24       0.89
        1.33  432.57    .487E+05     955.3         2.34       0.85
        1.41  432.65    .541E+05    1103.5         2.43       0.82
        1.49  432.73    .597E+05    1262.7         2.52       0.79

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)        5.27     0.66    6.58   42.32      0.10      0.33
   OUTFLOW: ID= 1 (******)        5.27     0.64    6.67   42.32      0.09      0.33


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  32.924
     TOTAL RAINFALL   (mm)=  62.921
```

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      RUNOFF COEFFICIENT   =   0.523

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

      Unit Hyd Qpeak  (cms)=   0.448

      PEAK FLOW       (cms)=   0.275 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  33.065
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.526

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     3.87   0.275     6.17    33.07
      + ID2= 2 (******):     0.45   0.050     6.00    32.92
        ================================================
        ID = 3 (******):     4.32   0.311     6.17    33.05

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     4.32   0.311     6.17    33.05
      + ID2= 2 (******):     5.27   0.643     6.67    42.32
        ================================================
        ID = 1 (******):     9.59   0.803     6.58    38.15

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         430.79        0.0450
                 23.82         429.79    0.0450 /0.0350  Main Channel
                 44.05         429.11        0.0350      Main Channel
                 70.46         428.15        0.0350      Main Channel
                112.31         427.60        0.0350      Main Channel
                150.77         427.27        0.0350      Main Channel
                179.17         427.15        0.0350      Main Channel
                214.90         427.16        0.0350      Main Channel
                261.89         427.25        0.0350      Main Channel
                317.65         427.56        0.0350      Main Channel
                382.75         427.99        0.0350      Main Channel
                394.40         428.11        0.0350      Main Channel
                432.80         428.07        0.0350      Main Channel
                432.91         428.07        0.0350      Main Channel
                462.57         428.15        0.0350      Main Channel
                522.90         429.79    0.0350 /0.0450  Main Channel
                585.04         429.90        0.0450
                731.92         430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04       11.5         0.73       2.99
        0.35   427.50    .570E+04       49.9         1.15       1.91
        0.53   427.68    .105E+05      119.2         1.49       1.47
        0.70   427.85    .163E+05      221.8         1.79       1.22
        0.88   428.03    .229E+05      360.8         2.06       1.06
        1.06   428.21    .312E+05      509.7         2.14       1.02
        1.23   428.38    .405E+05      771.0         2.49       0.88
        1.41   428.56    .500E+05     1076.3         2.82       0.77
        1.58   428.73    .598E+05     1423.8         3.12       0.70
        1.76   428.91    .699E+05     1812.5         3.40       0.64
        1.94   429.09    .802E+05     2241.5         3.66       0.60
        2.11   429.26    .907E+05     2709.1         3.91       0.56
        2.29   429.44    .102E+06     3215.8         4.15       0.53
        2.46   429.61    .113E+06     3761.6         4.38       0.50
        2.64   429.79    .124E+06     4346.4         4.59       0.48
        2.85   430.00    .139E+06     5173.9         4.88       0.45
        3.06   430.20    .156E+06     6075.9         5.12       0.43
        3.26   430.41    .173E+06     7054.9         5.33       0.41
        3.47   430.62    .193E+06     8114.3         5.52       0.40

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    9.59     0.80    6.58  38.15       0.01      0.73
   OUTFLOW: ID= 1 (******)    9.59     0.80    6.67  38.15       0.01      0.73

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

      Unit Hyd Qpeak  (cms)=   0.161

      PEAK FLOW       (cms)=   0.088 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  33.037
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.525

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.146

      PEAK FLOW       (cms)=   0.071 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  32.979
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.524

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.69   0.071     6.08    32.98
      + ID2= 2 (******):     0.97   0.088     6.08    33.04
        ================================================
        ID = 3 (******):     1.66   0.159     6.08    33.01

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.66   0.159     6.08    33.01
      + ID2= 2 (******):     9.59   0.798     6.67    38.15
        ================================================
        ID = 3 (******):    11.25   0.837     6.67    37.39

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         1.00     0.00     0.00     0.00     0.00     1.00
       100.00     0.00     0.00     0.00     0.00   100.00

                                 AREA     QPEAK     TPEAK     R.V.
                                 (ha)     (cms)     (hrs)     (mm)
      TOTAL HYD.(ID= 1):       11.25      0.84      6.67    37.39
      ================================================
      ID= 2  (   2)    :      11.25      0.84      6.67    37.39
      ID= 3  (   2)    :       0.00      0.00      6.67    37.39
      ID= 4  (   2)    :       0.00      0.00      0.00     0.00
      ID= 5  (   2)    :       0.00      0.00      0.00     0.00
      ID= 6  (   2)    :       0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------

                                   IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=          0.96          0.25
      Dep. Storage     (mm)=          2.00          4.48
      Average Slope     (%)=          0.64          0.54
      Length            (m)=         63.89        157.20
      Mannings n           =         0.013         0.030

      Max.Eff.Inten.(mm/hr)=         82.92         54.89
                  over (min)          5.00         10.00
      Storage Coeff.  (min)=          2.41 (ii)     6.63 (ii)
      Unit Hyd. Tpeak (min)=          5.00         10.00
      Unit Hyd. peak  (cms)=          0.30          0.14

                                                          *TOTALS*
      PEAK FLOW       (cms)=          0.22          0.03          0.252 (iii)
      TIME TO PEAK    (hrs)=          6.00          6.00           6.00
      RUNOFF VOLUME    (mm)=         60.92         33.07          55.07
      TOTAL RAINFALL   (mm)=         62.92         62.92          62.92
      RUNOFF COEFFICIENT   =          0.97          0.53           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------

                                   IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=          2.32          0.58
      Dep. Storage     (mm)=          2.00          4.48
      Average Slope     (%)=          0.70          0.60
      Length            (m)=        166.18        124.91
      Mannings n           =         0.013         0.030

      Max.Eff.Inten.(mm/hr)=         82.92         54.89
                  over (min)          5.00         10.00
      Storage Coeff.  (min)=          4.16 (ii)     7.64 (ii)
      Unit Hyd. Tpeak (min)=          5.00         10.00
      Unit Hyd. peak  (cms)=          0.24          0.13

                                                          *TOTALS*
      PEAK FLOW       (cms)=          0.53          0.07          0.595 (iii)
      TIME TO PEAK    (hrs)=          6.00          6.00           6.00
      RUNOFF VOLUME    (mm)=         60.92         33.07          55.35
      TOTAL RAINFALL   (mm)=         62.92         62.92          62.92
      RUNOFF COEFFICIENT   =          0.97          0.53           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.90   0.595     6.00    55.35
      + ID2= 2 (******):     1.21   0.252     6.00    55.07
        ================================================
        ID = 3 (******):     4.11   0.847     6.00    55.27

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         0.85     0.00     0.00     0.00     0.00     0.85
         0.85     1.00     0.00     0.00     0.00     1.85
         0.85   100.00     0.00     0.00     0.00   100.85

                                 AREA     QPEAK     TPEAK     R.V.
                                 (ha)     (cms)     (hrs)     (mm)
      TOTAL HYD.(ID= 1):       4.11      0.85      6.00    55.27
      ================================================
      ID= 2  (   2)    :       4.11      0.85      6.00    55.27
      ID= 3  (   2)    :       0.00      0.00      6.00    55.27
      ID= 4  (   2)    :       0.00      0.00      0.00     0.00
      ID= 5  (   2)    :       0.00      0.00      0.00     0.00
      ID= 6  (   2)    :       0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.00   0.000     6.67    37.39
      + ID2= 2 (******):     4.11   0.847     6.00    55.27
        ================================================
        ID = 3 (******):     4.11   0.847     6.00    55.27

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
```

```
41005>        0.00     5.20     0.00     0.00     0.00     5.20
41006>        1.00     5.20     0.00     0.00     0.00     6.20
41007>      100.00     5.20     0.00     0.00     0.00   105.20
41008>
41009>                              AREA     QPEAK     TPEAK    R.V.
41010>                              (ha)     (cms)     (hrs)     (mm)
41011>      TOTAL HYD.(ID= 1):     4.11      0.85      6.00    55.27
41012>      ================================================
41013>      ID= 2  (   2)    :     0.00      0.00      6.00    55.27
41014>      ID= 3  (   2)    :     4.11      0.85      6.00    55.27
41015>      ID= 4  (   2)    :     0.00      0.00      0.00     0.00
41016>      ID= 5  (   2)    :     0.00      0.00      0.00     0.00
41017>      ID= 6  (   2)    :     0.00      0.00      0.00     0.00
41018> ---------------------------------------------------------------------------
41019>
41020> --------------------
41021> | ADD HYD  (******)|
41022> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41023> --------------------          (ha)    (cms)    (hrs)      (mm)
41024>         ID1= 1 (******):     11.25   0.837     6.67    37.39
41025>       + ID2= 2 (******):      0.00   0.000     6.00    55.27
41026>         ================================================
41027>         ID = 3 (******):     11.25   0.837     6.67    37.39
41028>
41029>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41030> ---------------------------------------------------------------------------
41031> --------------------
41032> | DIVERTHYD(******)|
41033> | IN= 1   # OUT= 5 |
41034> --------------------
41035>      Outflow / Inflow  Relationships
41036>
41037>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
41038>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
41039>         0.00     0.00     0.00     0.00     0.00     0.00
41040>         1.00     0.00     0.00     0.00     0.00     1.00
41041>       100.00     0.00     0.00     0.00     0.00   100.00
41042>
41043>                              AREA     QPEAK     TPEAK    R.V.
41044>                              (ha)     (cms)     (hrs)     (mm)
41045>      TOTAL HYD.(ID= 1):    11.25      0.84      6.67    37.39
41046>      ================================================
41047>      ID= 2  (   2)    :    11.25      0.84      6.67    37.39
41048>      ID= 3  (   2)    :     0.00      0.00      6.67    37.39
41049>      ID= 4  (   2)    :     0.00      0.00      0.00     0.00
41050>      ID= 5  (   2)    :     0.00      0.00      0.00     0.00
41051>      ID= 6  (   2)    :     0.00      0.00      0.00     0.00
41052> ---------------------------------------------------------------------------
41053> --------------------
41054> | DIVERTHYD(******)|
41055> | IN= 1   # OUT= 5 |
41056> --------------------
41057>      Outflow / Inflow  Relationships
41058>
41059>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
41060>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
41061>         0.00     0.00     0.00     0.00     0.00     0.00
41062>         0.00     0.00     0.00     0.00     0.00     0.00
41063>         0.01     0.00     0.00     0.00     0.00     0.01
41064>         0.06     0.00     0.00     0.00     0.00     0.06
41065>         0.08     0.00     0.00     0.00     0.00     0.08
41066>         0.12     0.00     0.00     0.00     0.00     0.12
41067>         0.20     0.00     0.00     0.00     0.00     0.20
41068>         0.25     0.00     0.00     0.00     0.00     0.25
41069>         0.30     0.00     0.00     0.00     0.00     0.30
41070>         0.33     0.00     0.00     0.00     0.00     0.33
41071>         0.37     0.00     0.00     0.00     0.00     0.37
41072>         0.39     0.00     0.00     0.00     0.00     0.39
41073>         0.42     1.43     0.00     0.00     0.00     1.85
41074>         0.44     8.83     0.00     0.00     0.00     9.27
41075>         0.47    25.03     0.00     0.00     0.00    25.50
41076>         0.49    52.11     0.00     0.00     0.00    52.61
41077>         0.52    91.81     0.00     0.00     0.00    92.33
41078>         0.53   126.04     0.00     0.00     0.00   126.57
41079>
41080>                              AREA     QPEAK     TPEAK    R.V.
41081>                              (ha)     (cms)     (hrs)     (mm)
41082>      TOTAL HYD.(ID= 1):    11.25      0.84      6.67    37.39
41083>      ================================================
41084>      ID= 2  (   2)    :     8.07      0.40      6.67    37.39
41085>      ID= 3  (   2)    :     3.19      0.44      6.67    37.39
41086>      ID= 4  (   2)    :     0.00      0.00      0.00     0.00
41087>      ID= 5  (   2)    :     0.00      0.00      0.00     0.00
41088>      ID= 6  (   2)    :     0.00      0.00      0.00     0.00
41089> ---------------------------------------------------------------------------
41090> --------------------
41091> | CALIB            |
41092> | STANDHYD (******)|   Area    (ha)=   0.82
41093> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
41094> --------------------
41095>                                IMPERVIOUS    PERVIOUS (i)
41096>      Surface Area     (ha)=       0.81          0.01
41097>      Dep. Storage     (mm)=       2.00          4.48
41098>      Average Slope     (%)=       0.50          1.00
41099>      Length            (m)=      18.40          0.10
41100>      Mannings n           =      0.013         0.030
41101>
41102>      Max.Eff.Inten.(mm/hr)=      82.92         54.89
41103>                    over (min)       5.00          5.00
41104>      Storage Coeff.  (min)=       1.23 (ii)     1.24 (ii)
41105>      Unit Hyd. Tpeak (min)=       5.00          5.00
41106>      Unit Hyd. peak  (cms)=       0.33          0.33
41107>                                                      *TOTALS*
41108>      PEAK FLOW       (cms)=       0.19          0.00          0.188 (iii)
41109>      TIME TO PEAK    (hrs)=       6.00          6.00           6.00
41110>      RUNOFF VOLUME    (mm)=      60.92         33.07          60.64
41111>      TOTAL RAINFALL   (mm)=      62.92         62.92          62.92
41112>      RUNOFF COEFFICIENT   =       0.97          0.53           0.96
41113>
41114> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
41115>
41116>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41117>             CN*  =  85.0    Ia = Dep. Storage  (Above)
41118>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41119>            THAN THE STORAGE COEFFICIENT.
41120>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41121>
41122> ---------------------------------------------------------------------------
41123>
41124> --------------------
41125> | ADD HYD  (******)|
41126> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41127> --------------------          (ha)    (cms)    (hrs)      (mm)
41128>         ID1= 1 (******):      0.82   0.188     6.00    60.64
41129>       + ID2= 2 (******):      0.00   0.000     6.67    37.39
41130>         ================================================
41131>         ID = 3 (******):      0.82   0.188     6.00    60.64
41132>
41133>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41134> ---------------------------------------------------------------------------
41135>
41136> --------------------
41137> | ADD HYD  (******)|
41138> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
41139> --------------------          (ha)    (cms)    (hrs)      (mm)
41140>         ID1= 3 (******):      0.82   0.188     6.00    60.64
41141>       + ID2= 2 (******):      3.19   0.438     6.67    37.39
41142>         ================================================
41143>         ID = 1 (******):      4.01   0.450     6.67    42.15
41144>
41145>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41146> ---------------------------------------------------------------------------
41147> --------------------
41148> | DIVERTHYD(******)|
41149> | IN= 1   # OUT= 5 |
41150> --------------------
41151>      Outflow / Inflow  Relationships
41152>
41153>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
41154>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
41155>         0.00     0.00     0.00     0.00     0.00     0.00
41156>         0.00     0.00     0.00     0.00     0.00     0.00
41157>         0.03     0.00     0.00     0.00     0.00     0.03
41158>         0.04     0.00     0.00     0.00     0.00     0.04
41159>         0.09     0.00     0.00     0.00     0.00     0.09
41160>         0.12     0.00     0.00     0.00     0.00     0.13
41161>         0.20     0.00     0.00     0.00     0.00     0.20
41162>         0.30     0.00     0.00     0.00     0.00     0.30
41163>         0.37     0.00     0.00     0.00     0.00     0.37
41164>         0.43     0.00     0.00     0.00     0.00     0.43
41165>         0.48     0.00     0.00     0.00     0.00     0.48
41166>         0.52     0.00     0.00     0.00     0.00     0.52
41167>         0.57     0.00     0.00     0.00     0.00     0.57
41168>         0.67     0.00     0.00     0.00     0.00     0.67
41169>         0.68     0.00     0.00     0.00     0.00     0.68
41170>         0.68     0.02     0.00     0.00     0.00     0.70
41171>         0.72     0.56     0.00     0.00     0.00     1.28
41172>         0.73     0.75     0.01     0.00     0.00     1.48
41173>         1.10     1.87     0.54     0.00     0.00     3.51
41174>         1.40     2.25     2.61     0.00     0.00     6.26
41175>
41176>                              AREA     QPEAK     TPEAK    R.V.
41177>                              (ha)     (cms)     (hrs)     (mm)
41178>      TOTAL HYD.(ID= 1):     4.01      0.45      6.67    42.15
41179>      ================================================
41180>      ID= 2  (   3)    :     4.00      0.45      6.67    42.15
41181>      ID= 3  (   3)    :     0.00      0.00      6.67    42.15
41182>      ID= 4  (   3)    :     0.00      0.00      6.67    42.15
41183>      ID= 5  (   3)    :     0.00      0.00      0.00     0.00
41184>      ID= 6  (   3)    :     0.00      0.00      0.00     0.00
41185> ---------------------------------------------------------------------------
41186>
41187> --------------------
41188> | ADD HYD  (******)|
41189> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41190> --------------------          (ha)    (cms)    (hrs)      (mm)
41191>         ID1= 1 (******):      8.07   0.398     6.67    37.39
41192>       + ID2= 2 (******):      4.00   0.449     6.67    42.15
41193>         ================================================
41194>         ID = 3 (******):     12.07   0.848     6.67    38.97
41195>
41196>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41197> ---------------------------------------------------------------------------
41198> --------------------
41199> | CALIB            |
41200> | STANDHYD (******)|   Area    (ha)=   8.58
41201> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
41202> --------------------
41203>                                IMPERVIOUS    PERVIOUS (i)
41204>      Surface Area     (ha)=       4.98          3.60
41205>      Dep. Storage     (mm)=       2.00          4.48
41206>      Average Slope     (%)=       0.91          1.12
41207>      Length            (m)=     246.54        157.18
41208>      Mannings n           =      0.015         0.300
41209>
41210>      Max.Eff.Inten.(mm/hr)=      82.92         29.02
41211>                    over (min)       5.00         45.00
41212>      Storage Coeff.  (min)=       5.30 (ii)    40.24 (ii)
41213>      Unit Hyd. Tpeak (min)=       5.00         45.00
41214>      Unit Hyd. peak  (cms)=       0.21          0.03
41215>                                                      *TOTALS*
41216>      PEAK FLOW       (cms)=       1.10          0.16           1.159 (iii)
41217>      TIME TO PEAK    (hrs)=       6.00          6.58           6.00
41218>      RUNOFF VOLUME    (mm)=      60.92         33.07          49.22
41219>      TOTAL RAINFALL   (mm)=      62.92         62.92          62.92
41220>      RUNOFF COEFFICIENT   =       0.97          0.53           0.78
41221>
41222>
41223>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41224>             CN*  =  85.0    Ia = Dep. Storage  (Above)
41225>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41226>            THAN THE STORAGE COEFFICIENT.
41227>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41228>
41229> ---------------------------------------------------------------------------
41230>
41231> --------------------
41232> | ADD HYD  ( 50650)|
41233> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41234> --------------------          (ha)    (cms)    (hrs)      (mm)
41235>         ID1= 1 (******):      8.58   1.159     6.00    49.22
41236>       + ID2= 2 (******):    197.03   2.944     7.25    45.57
41237>         ================================================
41238>         ID = 3 ( 50650):    205.61   3.102     7.17    45.72
41239>
41240>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41241> ---------------------------------------------------------------------------
41242>
41243> --------------------
41244> | ADD HYD  ( 50650)|
41245> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
41246> --------------------          (ha)    (cms)    (hrs)      (mm)
41247>         ID1= 3 ( 50650):    205.61   3.102     7.17    45.72
41248>       + ID2= 2 (******):     12.07   0.848     6.67    38.97
41249>         ================================================
41250>         ID = 1 ( 50650):    217.68   3.780     6.83    45.35
41251>
41252>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41253> ---------------------------------------------------------------------------
41254> --------------------
41255> | ROUTE CHN( 60650)|
41256> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
41257> --------------------
41258>                <------ DATA FOR SECTION (   1.1) ------>
41259>               Distance      Elevation       Manning
41260>                   0.00         129.45        0.0450
41261>                   6.00         129.24        0.0450
41262>                   8.00         128.92        0.0450
41263>                  10.00         128.26        0.0450
41264>                  12.00         127.37        0.0450
41265>                  14.00         126.79        0.0450
41266>                  16.00         126.20        0.0450
41267>                  18.00         125.80        0.0450
41268>                  21.00         125.29        0.0450
41269>                  24.00         124.85        0.0450
41270>                  27.00         124.54        0.0350      Main Channel
41271>                  30.00         124.62        0.0350      Main Channel
41272>                  33.00         124.84    0.0350 /0.0450  Main Channel
41273>                  36.00         125.26        0.0450
41274>                  39.00         125.86        0.0450
41275>                  42.00         126.49        0.0450
41276>                  48.00         128.97        0.0450
41277>                  54.00         129.42        0.0450
41278>
41279>       <--------------------- TRAVEL TIME TABLE ---------------------->
41280>        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
41281>          (m)      (m)     (cu.m.)       (cms)         (m/s)       (min)
41282>         0.26   124.80    .390E+03         0.9          0.76        7.18
41283>         0.51   125.06    .124E+04         4.9          1.29        4.21
41284>         0.77   125.31    .239E+04        12.3          1.67        3.25
41285>         1.03   125.57    .380E+04        23.2          1.99        2.73
41286>         1.28   125.83    .544E+04        37.9          2.27        2.40
41287>         1.54   126.08    .731E+04        56.6          2.52        2.15
41288>         1.80   126.34    .937E+04        79.6          2.77        1.96
41289>         2.05   126.60    .116E+05       107.2          3.01        1.81
41290>         2.31   126.85    .140E+05       139.3          3.25        1.67
41291>         2.57   127.11    .165E+05       175.4          3.47        1.57
41292>         2.82   127.37    .191E+05       215.7          3.68        1.48
41293>         3.08   127.62    .219E+05       261.1          3.89        1.39
41294>         3.34   127.88    .247E+05       310.7          4.10        1.32
41295>         3.59   128.14    .276E+05       364.3          4.30        1.26
41296>         3.85   128.40    .307E+05       421.6          4.48        1.21
41297>         4.11   128.65    .338E+05       482.7          4.65        1.17
41298>         4.36   128.91    .371E+05       548.1          4.82        1.13
41299>         4.62   129.17    .406E+05       600.9          4.83        1.13
41300>         4.88   129.42    .446E+05       634.1          4.63        1.17
41301>
41302>                                      <---- hydrograph ---->   <-pipe / channel->
41303>                                AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
41304>                                (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
41305>    INFLOW : ID= 2 ( 50650)   217.68     3.78     6.83   45.35       0.44      1.08
41306>    OUTFLOW: ID= 1 ( 60650)   217.68     3.78     6.92   45.35       0.44      1.08
41307>
41308>
41309>
41310> ---------------------------------------------------------------------------
```

```
41311> --------------------
41312> | CALIB              |
41313> | STANDHYD ( 40670)|   Area    (ha)=  50.76
41314> |ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
41315> --------------------
41316>                               IMPERVIOUS    PERVIOUS (i)
41317>      Surface Area     (ha)=      37.06        13.71
41318>      Dep. Storage     (mm)=       2.00         6.10
41319>      Average Slope     (%)=       1.50         1.50
41320>      Length            (m)=     581.73        82.00
41321>      Mannings n            =      0.015        0.280
41322>
41323>      Max.Eff.Inten.(mm/hr)=      82.92        35.79
41324>                over (min)        10.00        30.00
41325>      Storage Coeff.  (min)=       7.64 (ii)   26.75 (ii)
41326>      Unit Hyd. Tpeak (min)=      10.00        30.00
41327>      Unit Hyd. peak  (cms)=       0.13         0.04
41328>                                                          *TOTALS*
41329>      PEAK FLOW       (cms)=       7.18         0.68          7.513 (iii)
41330>      TIME TO PEAK    (hrs)=       6.00         6.33          6.00
41331>      RUNOFF VOLUME    (mm)=      60.92        27.07         51.44
41332>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
41333>      RUNOFF COEFFICIENT   =       0.97         0.43          0.82
41334>
41335>
41336>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41337>             CN*  =  79.5    Ia = Dep. Storage  (Above)
41338>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41339>            THAN THE STORAGE COEFFICIENT.
41340>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41341>
41342> ------------------------------------------------------------------------------
41343>
41344> --------------------
41345> | ADD HYD  ( 50670)|
41346> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41347> --------------------           (ha)    (cms)    (hrs)     (mm)
41348>         ID1= 1 ( 40670):    50.76   7.513     6.00    51.44
41349>       + ID2= 2 ( 60650):   217.68   3.780     6.92    45.35
41350>         ====================================================
41351>         ID = 3 ( 50670):   268.44   9.589     6.00    46.50
41352>
41353>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41354> ------------------------------------------------------------------------------
41355> --------------------
41356> | ROUTE CHN( 60670)|
41357> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
41358> --------------------
41359>                <------ DATA FOR SECTION (   1.1) ------>
41360>                Distance      Elevation       Manning
41361>                    0.00         115.77        0.0450
41362>                   20.00         115.51        0.0450
41363>                   24.00         114.73        0.0450
41364>                   28.00         113.17    0.0450 /0.0350  Main Channel
41365>                   32.00         113.16    0.0350 /0.0450  Main Channel
41366>                   36.00         114.68        0.0450
41367>                   40.00         115.05        0.0450
41368>                   44.00         115.27        0.0450
41369>                   48.00         115.46        0.0450
41370>                   52.00         115.71        0.0450
41371>                   54.00         115.77        0.0450
41372>
41373>       <---------------------- TRAVEL TIME TABLE ----------------------->
41374>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
41375>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
41376>         0.14   113.30    .275E+03       0.3          0.60      13.60
41377>         0.27   113.43    .612E+03       1.2          0.93       8.76
41378>         0.41   113.57    .996E+03       2.4          1.18       6.88
41379>         0.55   113.71    .143E+04       4.1          1.39       5.85
41380>         0.69   113.84    .191E+04       6.1          1.57       5.18
41381>         0.82   113.98    .244E+04       8.6          1.73       4.70
41382>         0.96   114.12    .301E+04      11.6          1.87       4.34
41383>         1.10   114.26    .363E+04      14.9          2.00       4.06
41384>         1.24   114.39    .430E+04      18.8          2.12       3.82
41385>         1.37   114.53    .502E+04      23.1          2.24       3.63
41386>         1.51   114.67    .579E+04      27.9          2.34       3.46
41387>         1.65   114.81    .664E+04      32.5          2.38       3.41
41388>         1.78   114.94    .763E+04      37.8          2.41       3.36
41389>         1.92   115.08    .878E+04      44.0          2.44       3.33
41390>         2.06   115.22    .101E+05      50.8          2.45       3.31
41391>         2.20   115.35    .117E+05      58.8          2.46       3.30
41392>         2.33   115.49    .134E+05      68.1          2.47       3.29
41393>         2.47   115.63    .157E+05      74.2          2.30       3.53
41394>         2.61   115.77    .188E+05      85.0          2.20       3.69
41395>
41396>                                    <---- hydrograph ---->   <-pipe / channel->
41397>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
41398>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
41399>    INFLOW : ID= 2 ( 50670)  268.44     9.59    6.00  46.50      0.87      1.77
41400>    OUTFLOW: ID= 1 ( 60670)  268.44     9.23    6.08  46.50      0.85      1.75
41401>
41402>
41403>
41404> ------------------------------------------------------------------------------
41405> --------------------
41406> | CALIB              |
41407> | STANDHYD ( 40700)|   Area    (ha)=  10.86
41408> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
41409> --------------------
41410>                               IMPERVIOUS    PERVIOUS (i)
41411>      Surface Area     (ha)=       6.22         4.63
41412>      Dep. Storage     (mm)=       2.00         8.04
41413>      Average Slope     (%)=       2.30         2.30
41414>      Length            (m)=     269.03        47.00
41415>      Mannings n            =      0.015        0.350
41416>
41417>      Max.Eff.Inten.(mm/hr)=      82.92        45.08
41418>                over (min)        5.00         20.00
41419>      Storage Coeff.  (min)=       4.23 (ii)   16.78 (ii)
41420>      Unit Hyd. Tpeak (min)=       5.00         20.00
41421>      Unit Hyd. peak  (cms)=       0.24         0.06
41422>                                                          *TOTALS*
41423>      PEAK FLOW       (cms)=       1.35         0.32          1.567 (iii)
41424>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
41425>      RUNOFF VOLUME    (mm)=      60.92        27.04         45.71
41426>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
41427>      RUNOFF COEFFICIENT   =       0.97         0.43          0.73
41428>
41429> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
41430>
41431>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41432>             CN*  =  80.7    Ia = Dep. Storage  (Above)
41433>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41434>            THAN THE STORAGE COEFFICIENT.
41435>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41436>
41437> ------------------------------------------------------------------------------
41438>
41439> --------------------
41440> | ADD HYD  ( 50680)|
41441> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41442> --------------------           (ha)    (cms)    (hrs)     (mm)
41443>         ID1= 1 ( 40700):    10.86   1.567     6.00    45.71
41444>       + ID2= 2 ( 60670):   268.44   9.226     6.08    46.50
41445>         ====================================================
41446>         ID = 3 ( 50680):   279.29  10.055     6.08    46.47
41447>
41448>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41449> ------------------------------------------------------------------------------
41450> --------------------
41451> | CALIB              |
41452> | STANDHYD ( 40680)|   Area    (ha)=   1.20
41453> |ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
41454> --------------------
41455>                               IMPERVIOUS    PERVIOUS (i)
41456>      Surface Area     (ha)=       0.50         0.69
41457>      Dep. Storage     (mm)=       2.00         7.98
41458>      Average Slope     (%)=       0.60         0.60
41459>      Length            (m)=      89.27        69.00
41460>      Mannings n            =      0.015        0.350
41461>
41462>      Max.Eff.Inten.(mm/hr)=      82.92        26.82
41463>                over (min)        5.00         35.00
41464>      Storage Coeff.  (min)=       3.27 (ii)   32.37 (ii)
41465>      Unit Hyd. Tpeak (min)=       5.00         35.00
41466>      Unit Hyd. peak  (cms)=       0.27         0.03
41467>                                                          *TOTALS*
41468>      PEAK FLOW       (cms)=       0.11         0.03          0.119 (iii)
41469>      TIME TO PEAK    (hrs)=       6.00         6.42          6.00
41470>      RUNOFF VOLUME    (mm)=      60.92        26.50         39.88
41471>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
41472>      RUNOFF COEFFICIENT   =       0.97         0.42          0.63
41473>
41474> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
41475>
41476>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41477>             CN*  =  80.0    Ia = Dep. Storage  (Above)
41478>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41479>            THAN THE STORAGE COEFFICIENT.
41480>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41481>
41482> ------------------------------------------------------------------------------
41483> --------------------
41484> | CALIB              |
41485> | STANDHYD ( 40690)|   Area    (ha)=  25.49
41486> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
41487> --------------------
41488>                               IMPERVIOUS    PERVIOUS (i)
41489>      Surface Area     (ha)=       7.93        17.56
41490>      Dep. Storage     (mm)=       2.00         8.01
41491>      Average Slope     (%)=       3.10         3.10
41492>      Length            (m)=     412.26        40.00
41493>      Mannings n            =      0.015        0.350
41494>
41495>      Max.Eff.Inten.(mm/hr)=      82.92        41.79
41496>                over (min)        5.00         20.00
41497>      Storage Coeff.  (min)=       5.00 (ii)   15.73 (ii)
41498>      Unit Hyd. Tpeak (min)=       5.00         20.00
41499>      Unit Hyd. peak  (cms)=       0.21         0.07
41500>                                                          *TOTALS*
41501>      PEAK FLOW       (cms)=       1.56         1.14          2.334 (iii)
41502>      TIME TO PEAK    (hrs)=       6.00         6.17          6.00
41503>      RUNOFF VOLUME    (mm)=      60.92        25.23         35.04
41504>      TOTAL RAINFALL   (mm)=      62.92        62.92         62.92
41505>      RUNOFF COEFFICIENT   =       0.97         0.40          0.56
41506>
41507> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
41508>
41509>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
41510>             CN*  =  78.5    Ia = Dep. Storage  (Above)
41511>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
41512>            THAN THE STORAGE COEFFICIENT.
41513>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
41514>
41515> ------------------------------------------------------------------------------
41516>
41517> --------------------
41518> | ADD HYD  ( 50690)|
41519> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41520> --------------------           (ha)    (cms)    (hrs)     (mm)
41521>         ID1= 1 ( 40680):     1.20   0.119     6.00    39.88
41522>       + ID2= 2 ( 40690):    25.49   2.334     6.00    35.04
41523>         ====================================================
41524>         ID = 3 ( 50690):    26.69   2.453     6.00    35.26
41525>
41526>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41527> ------------------------------------------------------------------------------
41528>
41529> --------------------
41530> | ADD HYD  ( 50700)|
41531> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
41532> --------------------           (ha)    (cms)    (hrs)     (mm)
41533>         ID1= 1 ( 50680):   279.29  10.055     6.08    46.47
41534>       + ID2= 2 ( 50690):    26.69   2.453     6.00    35.26
41535>         ====================================================
41536>         ID = 3 ( 50700):   305.98  12.227     6.00    45.49
41537>
41538>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
41539> ------------------------------------------------------------------------------
41540> --------------------
41541> | ROUTE CHN( 60700)|
41542> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
41543> --------------------
41544>                <------ DATA FOR SECTION (   1.1) ------>
41545>                Distance      Elevation       Manning
41546>                    0.00         109.54        0.0450
41547>                    4.00         108.85        0.0450
41548>                    8.00         108.76        0.0450
41549>                   12.00         108.31        0.0450
41550>                   16.00         107.44        0.0450
41551>                   20.00         107.22        0.0450
41552>                   24.00         107.06        0.0450
41553>                   28.00         107.10        0.0450
41554>                   32.00         107.04        0.0450
41555>                   36.00         106.98        0.0450
41556>                   40.00         106.83        0.0350      Main Channel
41557>                   44.00         106.49        0.0350      Main Channel
41558>                   48.00         106.92    0.0350 /0.0450  Main Channel
41559>                   52.00         107.19        0.0450
41560>                   56.00         107.11        0.0450
41561>                   60.00         107.14        0.0450
41562>                   64.00         107.27        0.0450
41563>                   68.00         107.71        0.0450
41564>                   72.00         108.37        0.0450
41565>                   80.00         109.55        0.0450
41566>
41567>       <---------------------- TRAVEL TIME TABLE ----------------------->
41568>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
41569>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
41570>         0.12   106.60    .128E+03       0.1          0.43      35.47
41571>         0.23   106.72    .513E+03       0.4          0.69      22.34
41572>         0.35   106.83    .115E+04       1.1          0.90      17.05
41573>         0.52   107.00    .277E+04       3.6          1.21      12.69
41574>         0.69   107.17    .675E+04       8.9          1.21      12.64
41575>         0.86   107.34    .135E+05      19.9          1.35      11.35
41576>         1.02   107.51    .211E+05      36.3          1.58       9.70
41577>         1.19   107.68    .291E+05      57.8          1.82       8.39
41578>         1.36   107.85    .375E+05      84.0          2.06       7.43
41579>         1.53   108.02    .461E+05     114.5          2.28       6.71
41580>         1.70   108.19    .550E+05     149.1          2.49       6.15
41581>         1.87   108.35    .642E+05     187.4          2.68       5.71
41582>         2.04   108.52    .737E+05     228.8          2.85       5.37
41583>         2.21   108.69    .837E+05     274.1          3.01       5.09
41584>         2.37   108.86    .942E+05     316.2          3.08       4.97
41585>         2.54   109.03    .105E+06     372.6          3.25       4.72
41586>         2.71   109.20    .117E+06     433.4          3.40       4.50
41587>         2.88   109.37    .129E+06     498.6          3.55       4.31
41588>         3.05   109.54    .141E+06     568.2          3.70       4.14
41589>
41590>                                    <---- hydrograph ---->   <-pipe / channel->
41591>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
41592>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
41593>    INFLOW : ID= 2 ( 50700)  305.98    12.23    6.00  45.49      0.74      1.25
41594>    OUTFLOW: ID= 1 ( 60700)  305.98     9.50    6.17  45.49      0.70      1.22
41595>
41596>
41597>
41598> ------------------------------------------------------------------------------
41599> --------------------
41600> | CALIB              |
41601> | STANDHYD ( 40710)|   Area    (ha)=   6.35
41602> |ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
41603> --------------------
41604>                               IMPERVIOUS    PERVIOUS (i)
41605>      Surface Area     (ha)=       1.57         4.79
41606>      Dep. Storage     (mm)=       2.00         8.94
41607>      Average Slope     (%)=       3.90         3.90
41608>      Length            (m)=     205.82        41.00
41609>      Mannings n            =      0.015        0.360
41610>
41611>      Max.Eff.Inten.(mm/hr)=      82.92        45.94
41612>                over (min)        5.00         15.00
41613>      Storage Coeff.  (min)=       3.08 (ii)   13.04 (ii)
41614>      Unit Hyd. Tpeak (min)=       5.00         15.00
41615>      Unit Hyd. peak  (cms)=       0.27         0.08
41616>                                                          *TOTALS*
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      PEAK FLOW       (cms)=       0.30         0.36          0.604 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      60.92        25.35          32.73
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.40           0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   0.604     6.00    32.73
      + ID2= 2 ( 60700):   305.98   9.503     6.17    45.49
        ====================================================
        ID = 3 ( 50710):   312.34   9.902     6.17    45.23

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.12         3.92
      Dep. Storage     (mm)=       2.00         5.64
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     408.55        40.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=      82.92        49.02
                  over (min)       5.00        10.00
      Storage Coeff.  (min)=       5.02 (ii)    8.63 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.21         0.12
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.67         0.40           5.062 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      60.92        28.01          55.54
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.45           0.88


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7080      1.0040
                          0.2890      0.3890   |    0.7750      1.0700
                          0.3270      0.4500   |    0.9210      1.2580
                          0.3600      0.6030   |    1.0000      1.3280
                          0.3900      0.6540   |    1.0820      1.3980
                          0.4190      0.7110   |    1.1670      1.4690
                          0.4450      0.7680   |    1.2550      1.5390
                          0.4700      0.8260   |    1.3460      1.6090
                          0.4960      0.8830   |    1.9470      1.9930
                          0.6450      0.9400   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037      5.062      6.00      55.54
   OUTFLOW: ID= 1 ( 70150)     25.037      0.479      6.58      55.53
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.45
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8453

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  --------------------------
  | Junction Command(70151) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.76         3.40
      Dep. Storage     (mm)=       2.00         6.50
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     307.19        41.00
      Mannings n           =      0.015        0.290

      Max.Eff.Inten.(mm/hr)=      82.92        46.43
                  over (min)       5.00        10.00
      Storage Coeff.  (min)=       4.19 (ii)    8.88 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.24         0.12
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.40         0.32           2.720 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      60.92        26.41          52.29
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.42           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.2230      0.3310
                          0.0580      0.0840   |    0.2500      0.3590
                          0.0780      0.1040   |    0.2790      0.3870
                          0.0930      0.1240   |    0.3090      0.4160
                          0.1060      0.1440   |    0.3750      0.4780
                          0.1180      0.1640   |    0.4110      0.5120
                          0.1280      0.1840   |    0.4470      0.5450
                          0.1590      0.2550   |    0.5250      0.6130
                          0.1770      0.2790   |    0.7390      0.9130
                          0.1990      0.3030   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155      2.720      6.00      52.29
   OUTFLOW: ID= 1 ( 70160)     14.155      0.329      6.58      52.27
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.11
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4360

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  --------------------------
  | Junction Command(70161) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   312.34   9.902     6.17    45.23
      + ID2= 2 ( 70150):    25.04   0.479     6.58    55.53
        ====================================================
        ID = 3 ( 50730):   337.37  10.352     6.17    45.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   337.37  10.352     6.17    45.99
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 1 ( 50730):   337.37  10.352     6.17    45.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50730):   337.37  10.352     6.17    45.99
      + ID2= 2 ( 70160):    14.15   0.329     6.58    52.27
        ====================================================
        ID = 3 ( 50730):   351.53  10.658     6.17    46.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   351.53  10.658     6.17    46.25
      + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 1 ( 50730):   351.53  10.658     6.17    46.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00          96.28        0.0450
                    9.00          95.39        0.0450
                   12.00          94.87        0.0450
                   15.00          94.17        0.0450
                   18.00          93.95        0.0450
                   21.00          94.01        0.0450
                   24.00          93.92        0.0450
                   27.00          93.98    0.0450 /0.0350  Main Channel
                   30.00          93.33        0.0350      Main Channel
                   32.00          93.73    0.0350 /0.0450  Main Channel
                   34.00          94.58        0.0450
                   35.00          95.06        0.0450
                   40.00          95.32        0.0450
                   45.00          96.12        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)      (cu.m.)      (cms)       (m/s)      (min)
         0.13    93.46    .164E+03        0.0        0.36       89.51
         0.26    93.60    .654E+03        0.2        0.57       56.39
         0.40    93.73    .147E+04        0.6        0.75       43.03
         0.55    93.88    .274E+04        1.4        0.99       32.63
         0.70    94.03    .550E+04        2.8        1.00       32.28
         0.85    94.18    .104E+05        5.8        1.08       29.94
         1.00    94.33    .159E+05       10.1        1.24       26.04
         1.15    94.48    .216E+05       15.6        1.41       22.97
         1.29    94.63    .275E+05       22.2        1.57       20.64
         1.44    94.78    .338E+05       29.9        1.72       18.84
         1.59    94.93    .404E+05       38.6        1.86       17.44
         1.74    95.08    .473E+05       48.0        1.97       16.40
         1.89    95.23    .549E+05       58.1        2.05       15.76
         2.04    95.38    .637E+05       70.1        2.14       15.14
         2.19    95.53    .731E+05       83.0        2.21       14.67
         2.34    95.68    .833E+05       97.5        2.27       14.23
         2.49    95.83    .941E+05      113.5        2.34       13.82
         2.64    95.98    .106E+06      131.2        2.41       13.42
         2.79    96.13    .118E+06      150.7        2.48       13.05

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50730)  351.53    10.66    6.17  46.25      1.01      1.26
   OUTFLOW: ID= 1 ( 60730)  351.53     7.80    6.67  46.25      0.91      1.15


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--------------------
| CALIB            |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      56.24        13.19
      Dep. Storage     (mm)=       2.00         5.50
      Average Slope     (%)=       1.70         1.70
      Length            (m)=     680.34        43.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=      82.92        48.88
                  over (min)       10.00        15.00
      Storage Coeff.  (min)=       8.08 (ii)   13.00 (ii)
      Unit Hyd. Tpeak (min)=       10.00        15.00
      Unit Hyd. peak  (cms)=       0.13         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       10.74        1.08          11.668 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      60.92        27.76          54.29
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.97         0.44           0.86
```

```
        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    3.6700      4.7800
                           0.2600      1.6200   |    8.6400      6.0000
                           1.4500      2.7100   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)     69.429    11.668      6.00      54.29
   OUTFLOW: ID= 1 ( 70170)     69.429     1.264      6.75      54.27
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.84
                  TIME SHIFT OF PEAK FLOW          (min)= 45.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  2.5409

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(70171) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70170)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70171)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 60730):   351.53   7.800     6.67    46.25
     + ID2= 2 ( 70170):    69.43   1.264     6.75    54.27
       ================================================
       ID = 3 ( 50770):   420.96   9.058     6.67    47.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50770):   420.96   9.058     6.67    47.57
     + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
       ================================================
       ID = 1 ( 50770):   420.96   9.058     6.67    47.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         92.38        0.0450
                   3.00         90.34        0.0450
                   6.00         89.94        0.0450
                   9.00         89.83        0.0450
                  12.00         89.80        0.0450
                  15.00         89.72        0.0450
                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15        0.0350      Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76        0.0450
                  30.00         89.78        0.0450
                  33.00         89.79        0.0450
                  36.00         89.80        0.0450
                  39.00         89.72        0.0450
                  42.00         90.35        0.0450
                  45.00         91.36        0.0450
                  48.00         92.10        0.0450
                  51.00         92.21        0.0450
                  54.00         92.34        0.0450
                  56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   89.29    .298E+02       0.0         0.31       13.27
        0.29   89.44    .119E+03       0.2         0.50        8.36
        0.44   89.58    .268E+03       0.7         0.65        6.38
        0.61   89.76    .588E+03       1.9         0.79        5.25
        0.78   89.93    .179E+04       5.1         0.71        5.86
        0.96   90.10    .329E+04      11.4         0.87        4.79
        1.13   90.27    .489E+04      20.2         1.03        4.03
        1.30   90.45    .656E+04      31.5         1.19        3.47
        1.47   90.62    .828E+04      45.0         1.35        3.06
        1.65   90.79    .100E+05      60.5         1.50        2.76
        1.82   90.97    .118E+05      77.9         1.64        2.53
        1.99   91.14    .136E+05      97.1         1.77        2.34
        2.17   91.31    .155E+05     118.1         1.90        2.18
        2.34   91.48    .173E+05     140.6         2.02        2.06
        2.51   91.66    .193E+05     164.7         2.13        1.95
        2.68   91.83    .212E+05     190.5         2.23        1.86
        2.86   92.00    .232E+05     218.0         2.33        1.78
        3.03   92.18    .253E+05     242.7         2.39        1.74
        3.20   92.35    .275E+05     262.6         2.37        1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  420.96     9.06    6.67  47.57      0.89      0.80
   OUTFLOW: ID= 1 ( 60770)  420.96     9.02    6.75  47.57      0.89      0.80



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78         11.79
     Dep. Storage     (mm)=       2.00          8.70
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     404.74         43.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=      82.92         40.46
                  over (min)        5.00         20.00
     Storage Coeff.  (min)=       6.15 (ii)    19.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.19          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.67          0.66        3.104 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17         6.00
     RUNOFF VOLUME    (mm)=      60.92         24.62        42.77
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =       0.97          0.39         0.68


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57   3.104     6.00    42.77
     + ID2= 2 ( 60770):   420.96   9.018     6.75    47.57
       ================================================
       ID = 3 ( 50780):   445.53   9.555     6.67    47.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38          2.81
     Dep. Storage     (mm)=       2.00          5.74
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     233.56         52.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=      82.92         47.59
                  over (min)        5.00         20.00
     Storage Coeff.  (min)=       4.73 (ii)    18.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.22          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.15          0.20         1.286 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17         6.00
     RUNOFF VOLUME    (mm)=      60.92         28.10        48.71
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =       0.97          0.45         0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66          0.49
     Dep. Storage     (mm)=       2.00          7.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     185.29         48.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=      82.92         43.31
                  over (min)        5.00         10.00
     Storage Coeff.  (min)=       3.93 (ii)     8.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.24          0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.05          0.04         1.099 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=      60.92         24.90        57.39
     TOTAL RAINFALL   (mm)=      62.92         62.92        62.92
     RUNOFF COEFFICIENT   =       0.97          0.40         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40790):     8.18   1.286     6.00    48.71
     + ID2= 2 ( 40800):     5.15   1.099     6.00    57.39
       ================================================
       ID = 3 ( 50795):    13.33   2.385     6.00    52.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.7780      0.6570
                           0.0040      0.0150   |    1.1550      0.7720
                           0.0090      0.0810   |    1.5780      0.8930
                           0.0120      0.1550   |    1.9240      0.9870
                           0.0140      0.2370   |    2.4190      1.1190
                           0.0160      0.3260   |    2.9510      1.2560
                           0.0620      0.3720   |    3.5980      1.3270
                           0.2560      0.4700   |    4.5570      1.3990
                           0.5310      0.5740   |    5.7230      1.4730

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332     2.385      6.00      52.06
   OUTFLOW: ID= 1 ( 70180)     13.332     0.250      6.67      51.99
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.49
                  TIME SHIFT OF PEAK FLOW          (min)= 40.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4670

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  --------------------------
  | Junction Command(70181) |
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                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70180)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70181)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41          2.16
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     154.27         40.00
     Mannings n           =      0.013         0.250

     Max.Eff.Inten.(mm/hr)=      82.92         63.39
                  over (min)        5.00         15.00
     Storage Coeff.  (min)=       3.57 (ii)    12.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
```

```
      Unit Hyd. peak  (cms)=       0.26         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.28         0.24          0.500 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      61.92        36.74          45.47
      TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
      RUNOFF COEFFICIENT   =       0.98         0.58           0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40805):     3.57   0.500     6.00    45.47
      + ID2= 2 ( 70180):    13.33   0.250     6.67    51.99
        ====================================================
        ID = 3 ( 50790):    16.90   0.540     6.00    50.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50790):    16.90   0.540     6.00    50.61
      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 1 ( 50790):    16.90   0.540     6.00    50.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50780):   445.53   9.555     6.67    47.30
      + ID2= 2 ( 50790):    16.90   0.540     6.00    50.61
        ====================================================
        ID = 3 ( 50800):   462.43   9.886     6.67    47.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         88.54         0.0450
                  3.00         88.18         0.0450
                  6.00         87.54         0.0450
                  9.00         87.44         0.0450
                 12.00         87.13         0.0450
                 15.00         87.23         0.0450
                 18.00         87.18         0.0450
                 21.00         86.49    0.0450 /0.0350  Main Channel
                 24.00         85.82         0.0350      Main Channel
                 27.00         86.44    0.0350 /0.0450  Main Channel
                 30.00         87.18         0.0450
                 33.00         87.16         0.0450
                 36.00         87.25         0.0450
                 39.00         87.46         0.0450
                 42.00         87.70         0.0450
                 45.00         87.80         0.0450
                 48.00         88.00         0.0450
                 49.00         88.12         0.0450
                 50.00         88.23         0.0450
                 52.00         88.59         0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12    85.95    .779E+02       0.0         0.37       48.75
        0.25    86.07    .312E+03       0.2         0.59       30.71
        0.37    86.19    .701E+03       0.5         0.77       23.44
        0.49    86.32    .125E+04       1.1         0.94       19.35
        0.62    86.44    .195E+04       1.9         1.09       16.67
        0.77    86.59    .299E+04       3.8         1.36       13.29
        0.92    86.74    .424E+04       6.2         1.59       11.42
        1.07    86.89    .570E+04       9.3         1.77       10.25
        1.22    87.04    .736E+04      13.0         1.92        9.44
        1.37    87.19    .938E+04      16.8         1.94        9.33
        1.52    87.34    .134E+05      22.9         1.86        9.74
        1.66    87.49    .182E+05      31.1         1.86        9.72
        1.81    87.64    .237E+05      41.6         1.91        9.51
        1.96    87.79    .298E+05      53.9         1.96        9.22
        2.11    87.94    .365E+05      68.9         2.05        8.84
        2.26    88.09    .437E+05      86.5         2.15        8.43
        2.41    88.24    .513E+05     106.2         2.25        8.04
        2.56    88.39    .592E+05     128.2         2.36        7.69
        2.71    88.54    .674E+05     152.5         2.46        7.36

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  462.43     9.89     6.67   47.43      1.09      1.79
   OUTFLOW: ID= 1 ( 60800)  462.43     9.71     6.83   47.43      1.08      1.78


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--------------------
| CALIB            |
| STANDHYD ( 40820)|   Area    (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         11.23
     Dep. Storage     (mm)=       2.00          9.57
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     307.74         44.00
     Mannings n           =      0.015         0.390

     Max.Eff.Inten.(mm/hr)=      82.92         37.18
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       4.59 (ii)    18.49 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.23          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.41          0.60          0.804 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      60.92         21.64          26.74
     TOTAL RAINFALL   (mm)=      62.92         62.92          62.92
     RUNOFF COEFFICIENT   =       0.97          0.34           0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  73.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40820):    14.21   0.804     6.00    26.74
      + ID2= 2 ( 60800):   462.43   9.711     6.83    47.43
        ====================================================
        ID = 3 ( 50820):   476.64   9.972     6.75    46.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50500):  1190.06  34.943     7.00    42.31
      + ID2= 2 ( 50820):   476.64   9.972     6.75    46.81
        ====================================================
        ID = 3 ( 50830):  1666.69  44.800     6.92    43.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.12         0.0450
                 20.00         81.53         0.0450
                 24.00         81.26         0.0450
                 28.00         81.27         0.0450
                 32.00         80.34    0.0450 /0.0350  Main Channel
                 36.00         79.95         0.0350      Main Channel
                 40.00         80.78         0.0450
                 44.00         81.45         0.0450
                 48.00         81.53         0.0450
                 52.00         81.49         0.0450
                 56.00         81.51         0.0450
                 60.00         81.58         0.0450
                 64.00         81.58         0.0450
                 68.00         81.61         0.0450
                 72.00         81.75         0.0450
                 80.00         82.07         0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10    80.05    .555E+01       0.0         0.24        5.45
        0.19    80.14    .222E+02       0.1         0.38        3.43
        0.29    80.24    .499E+02       0.3         0.50        2.62
        0.39    80.34    .888E+02       0.7         0.60        2.16
        0.50    80.45    .146E+03       1.4         0.77        1.68
        0.62    80.57    .213E+03       2.5         0.91        1.43
        0.73    80.68    .290E+03       3.8         1.02        1.27
        0.85    80.80    .375E+03       5.4         1.13        1.15
        0.96    80.91    .471E+03       7.6         1.26        1.03
        1.08    81.03    .578E+03      10.1         1.37        0.95
        1.19    81.14    .695E+03      13.0         1.46        0.89
        1.31    81.26    .823E+03      16.2         1.53        0.85
        1.43    81.37    .100E+04      19.7         1.53        0.85
        1.54    81.49    .121E+04      24.1         1.56        0.84
        1.66    81.60    .155E+04      29.0         1.46        0.89
        1.77    81.72    .204E+04      36.4         1.39        0.93
        1.89    81.84    .259E+04      45.6         1.38        0.95
        2.00    81.95    .320E+04      56.7         1.38        0.94
        2.12    82.07    .387E+04      69.6         1.40        0.93

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1666.69    44.80     6.92   43.60      1.88      1.38
   OUTFLOW: ID= 1 ( 60830) 1666.69    44.83     6.92   43.60      1.87      1.38


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| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36         15.15
     Dep. Storage     (mm)=       2.00          5.54
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     550.83         40.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=      82.92         73.85
                   over (min)      10.00         20.00
     Storage Coeff.  (min)=       7.72 (ii)    17.22 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.13          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.77          1.60          5.896 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      60.92         31.98          47.45
     TOTAL RAINFALL   (mm)=      62.92         62.92          62.92
     RUNOFF COEFFICIENT   =       0.97          0.51           0.75


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45          1.59
     Dep. Storage     (mm)=       2.00          9.61
     Average Slope     (%)=       3.20          3.20
     Length            (m)=     116.69         69.00
     Mannings n           =      0.015         0.370

     Max.Eff.Inten.(mm/hr)=      82.92         31.37
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       2.32 (ii)    19.42 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.30          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.09          0.124 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      60.92         22.50          28.05
     TOTAL RAINFALL   (mm)=      62.92         62.92          62.92
     RUNOFF COEFFICIENT   =       0.97          0.36           0.45

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  75.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51   5.896     6.00    47.45
      + ID2= 2 ( 40840):     2.04   0.124     6.00    28.05
        ====================================================
        ID = 3 ( 50840):    47.56   6.020     6.00    46.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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42535> ------------------------------------------------------------------------------
42536>
42537> --------------------
42538> | ADD HYD  ( 50840)|
42539> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
42540> --------------------          (ha)    (cms)    (hrs)     (mm)
42541>         ID1= 3 ( 50840):    47.56   6.020     6.00    46.61
42542>       + ID2= 2 ( 60830):  1666.69  44.825     6.92    43.60
42543>         ==================================================
42544>         ID = 1 ( 50840):  1714.25  45.655     6.92    43.68
42545>
42546>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
42547> ------------------------------------------------------------------------------
42548> --------------------
42549> | ROUTE CHN( 60840)|
42550> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
42551> --------------------
42552>                <------ DATA FOR SECTION (   1.1) ------>
42553>                Distance      Elevation       Manning
42554>                    0.00         82.18        0.0450
42555>                   32.00         79.04        0.0450
42556>                   40.00         78.76        0.0450
42557>                   48.00         78.58        0.0450
42558>                   56.00         78.21        0.0450
42559>                   64.00         76.89        0.0350      Main Channel
42560>                   72.00         78.08        0.0450
42561>                   80.00         79.44        0.0450
42562>                   88.00         80.28        0.0450
42563>                   96.00         80.92        0.0450
42564>                  104.00         81.29        0.0450
42565>                  112.00         81.62        0.0450
42566>                  120.00         81.76        0.0450
42567>                  128.00         81.81        0.0450
42568>                  140.00         82.02        0.0450
42569>
42570>       <---------------------- TRAVEL TIME TABLE ---------------------->
42571>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
42572>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
42573>         0.27    77.16    .320E+03        0.2         0.48      24.00
42574>         0.54    77.43    .128E+04        1.4         0.75      15.12
42575>         0.81    77.70    .288E+04        4.2         0.99      11.54
42576>         1.08    77.97    .512E+04        9.0         1.20       9.53
42577>         1.35    78.24    .799E+04       16.6         1.42       8.02
42578>         1.62    78.51    .119E+05       26.9         1.54       7.40
42579>         1.89    78.78    .176E+05       41.0         1.59       7.15
42580>         2.16    79.05    .252E+05       62.9         1.71       6.68
42581>         2.43    79.32    .341E+05       93.9         1.89       6.05
42582>         2.70    79.59    .438E+05      131.1         2.05       5.56
42583>         2.97    79.86    .544E+05      175.1         2.20       5.18
42584>         3.24    80.13    .660E+05      226.4         2.35       4.86
42585>         3.51    80.40    .787E+05      284.9         2.48       4.60
42586>         3.77    80.67    .924E+05      351.1         2.60       4.39
42587>         4.04    80.94    .107E+06      425.7         2.72       4.20
42588>         4.31    81.21    .124E+06      507.1         2.81       4.06
42589>         4.58    81.48    .141E+06      598.4         2.90       3.94
42590>         4.85    81.75    .161E+06      695.9         2.96       3.86
42591>         5.12    82.02    .185E+06      800.9         2.97       3.85
42592>
42593>                                      <---- hydrograph ---->   <-pipe / channel->
42594>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
42595>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
42596>    INFLOW : ID= 2 ( 50840) 1714.25    45.66    6.92  43.68      1.95      1.62
42597>    OUTFLOW: ID= 1 ( 60840) 1714.25    45.49    7.00  43.68      1.94      1.62
42598>
42599>
42600>
42601> ------------------------------------------------------------------------------
42602> --------------------
42603> | CALIB              |
42604> | STANDHYD ( 40850)|   Area    (ha)=  26.33
42605> |ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
42606> --------------------
42607>                                IMPERVIOUS    PERVIOUS (i)
42608>      Surface Area     (ha)=       8.14         18.19
42609>      Dep. Storage     (mm)=       2.00          7.29
42610>      Average Slope     (%)=       2.00          2.00
42611>      Length            (m)=     418.93        142.00
42612>      Mannings n           =      0.015         0.310
42613>
42614>      Max.Eff.Inten.(mm/hr)=      82.92         26.66
42615>                    over (min)        5.00         35.00
42616>      Storage Coeff.  (min)=       5.76 (ii)    34.90 (ii)
42617>      Unit Hyd. Tpeak (min)=       5.00         35.00
42618>      Unit Hyd. peak  (cms)=       0.20          0.03
42619>                                                          *TOTALS*
42620>      PEAK FLOW       (cms)=       1.42          0.76          1.727 (iii)
42621>      TIME TO PEAK    (hrs)=       6.00          6.50          6.00
42622>      RUNOFF VOLUME    (mm)=      60.92         25.58         34.28
42623>      TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
42624>      RUNOFF COEFFICIENT   =       0.97          0.41          0.54
42625>
42626>
42627>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
42628>             CN*  =  77.5    Ia = Dep. Storage  (Above)
42629>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
42630>            THAN THE STORAGE COEFFICIENT.
42631>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
42632>
42633> ------------------------------------------------------------------------------
42634>
42635> --------------------
42636> | ADD HYD  ( 50850)|
42637> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
42638> --------------------          (ha)    (cms)    (hrs)     (mm)
42639>         ID1= 1 ( 40850):    26.33   1.727     6.00    34.28
42640>       + ID2= 2 ( 60840):  1714.25  45.487     7.00    43.68
42641>         ==================================================
42642>         ID = 3 ( 50850):  1740.57  46.062     7.00    43.54
42643>
42644>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
42645> ------------------------------------------------------------------------------
42646> --------------------
42647> | CALIB              |
42648> | STANDHYD ( 40880)|   Area    (ha)=  56.14
42649> |ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
42650> --------------------
42651>                                IMPERVIOUS    PERVIOUS (i)
42652>      Surface Area     (ha)=      20.77         35.37
42653>      Dep. Storage     (mm)=       2.00          8.79
42654>      Average Slope     (%)=       1.30          1.30
42655>      Length            (m)=     611.77        120.00
42656>      Mannings n           =      0.015         0.330
42657>
42658>      Max.Eff.Inten.(mm/hr)=      82.92         23.15
42659>                    over (min)       10.00         45.00
42660>      Storage Coeff.  (min)=       8.22 (ii)    41.15 (ii)
42661>      Unit Hyd. Tpeak (min)=      10.00         45.00
42662>      Unit Hyd. peak  (cms)=       0.13          0.03
42663>                                                          *TOTALS*
42664>      PEAK FLOW       (cms)=       3.67          1.26          4.051 (iii)
42665>      TIME TO PEAK    (hrs)=       6.00          6.67          6.00
42666>      RUNOFF VOLUME    (mm)=      60.92         25.73         37.70
42667>      TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
42668>      RUNOFF COEFFICIENT   =       0.97          0.41          0.60
42669>
42670>
42671>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
42672>             CN*  =  79.9    Ia = Dep. Storage  (Above)
42673>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
42674>            THAN THE STORAGE COEFFICIENT.
42675>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
42676>
42677> ------------------------------------------------------------------------------
42678> --------------------
42679> | ROUTE CHN( 60880)|
42680> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
42681> --------------------
42682>                <------ DATA FOR SECTION (   1.1) ------>
42683>                Distance      Elevation       Manning
42684>                    0.00         85.55        0.0450
42685>                   24.00         85.23        0.0450
42686>                   28.00         85.17        0.0450
42687>                   32.00         85.07        0.0450
42688>                   36.00         84.96        0.0350      Main Channel
42689>                   40.00         84.96        0.0350      Main Channel
42690>                   44.00         85.00    0.0350 /0.0450  Main Channel
42691>                   48.00         85.03        0.0450
42692>                   52.00         85.18        0.0450
42693>                   56.00         85.22        0.0450
42694>                   60.00         85.31        0.0450
42695>                   64.00         85.33        0.0450
42696>                   68.00         85.38        0.0450
42697>                   80.00         85.59        0.0450
42698>
42699>       <---------------------- TRAVEL TIME TABLE ---------------------->
42700>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
42701>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
42702>         0.01    84.96    .992E+01        0.0         0.05     238.32
42703>         0.04    84.99    .159E+03        0.0         0.21      57.53
42704>         0.07    85.03    .408E+03        0.2         0.32      38.32
42705>         0.10    85.06    .751E+03        0.4         0.40      30.54
42706>         0.13    85.09    .114E+04        0.7         0.47      25.77
42707>         0.16    85.12    .158E+04        1.2         0.53      22.66
42708>         0.19    85.15    .206E+04        1.7         0.59      20.45
42709>         0.22    85.18    .259E+04        2.3         0.64      18.91
42710>         0.25    85.21    .321E+04        3.0         0.67      18.12
42711>         0.29    85.24    .393E+04        3.8         0.70      17.32
42712>         0.32    85.27    .473E+04        4.8         0.73      16.56
42713>         0.35    85.30    .562E+04        5.9         0.76      15.89
42714>         0.38    85.34    .663E+04        7.0         0.77      15.69
42715>         0.41    85.37    .777E+04        8.5         0.80      15.20
42716>         0.44    85.40    .902E+04       10.2         0.82      14.69
42717>         0.47    85.43    .104E+05       12.2         0.85      14.19
42718>         0.50    85.46    .118E+05       14.3         0.88      13.73
42719>         0.53    85.49    .133E+05       16.7         0.91      13.31
42720>         0.56    85.52    .150E+05       19.3         0.94      12.91
42721>
42722>                                      <---- hydrograph ---->   <-pipe / channel->
42723>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
42724>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
42725>    INFLOW : ID= 2 ( 40880)   56.14     4.05    6.00  37.70      0.29      0.71
42726>    OUTFLOW: ID= 1 ( 60880)   56.14     2.76    6.17  37.67      0.25      0.66
42727>
42728>
42729>
42730> ------------------------------------------------------------------------------
42731> --------------------
42732> | ROUTEPIPE( 80880)|     PIPE Number     =   1.00
42733> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
42734> | DT=  5.0 min     |     Length        (m)= 888.03
42735> --------------------     Slope       (m/m)=  0.004
42736>                          Manning n        =  0.013
42737>
42738>      <----------------- TRAVEL TIME TABLE ------------------->
42739>        DEPTH      VOLUME     FLOW RATE     VELOCITY     TRAV.TIME
42740>          (m)     (cu.m.)       (cms)         (m/s)         min
42741>         0.10    .213E+03        0.2          0.93         15.91
42742>         0.20    .426E+03        0.7          1.41         10.53
42743>         0.30    .639E+03        1.3          1.76          8.42
42744>         0.40    .853E+03        2.0          2.04          7.25
42745>         0.50    .107E+04        2.7          2.27          6.51
42746>         0.60    .128E+04        3.6          2.47          5.99
42747>         0.70    .149E+04        4.4          2.64          5.60
42748>         0.80    .171E+04        5.4          2.79          5.30
42749>         0.90    .192E+04        6.3          2.92          5.06
42750>         1.00    .213E+04        7.3          3.04          4.87
42751>         1.10    .234E+04        8.3          3.15          4.71
42752>         1.20    .256E+04        9.3          3.24          4.57
42753>         1.30    .277E+04       10.4          3.33          4.45
42754>         1.40    .298E+04       11.4          3.40          4.35
42755>         1.50    .320E+04       12.5          3.48          4.26
42756>         1.60    .341E+04       13.6          3.54          4.18
42757>         1.70    .362E+04       14.7          3.60          4.11
42758>         1.80    .384E+04       15.8          3.66          4.05
42759>         1.90    .405E+04       16.9          3.71          3.99
42760>                                      <---- hydrograph ---->   <-pipe / channel->
42761>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
42762>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
42763>    INFLOW : ID= 2 ( 60880)   56.14     2.76    6.17  37.67      0.50      2.28
42764>    OUTFLOW: ID= 1 ( 80880)   56.14     2.63    6.25  37.67      0.49      2.24
42765>
42766>
42767>
42768> ------------------------------------------------------------------------------
42769> --------------------
42770> | CALIB              |
42771> | STANDHYD ( 40890)|   Area    (ha)=  41.71
42772> |ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
42773> --------------------
42774>                                IMPERVIOUS    PERVIOUS (i)
42775>      Surface Area     (ha)=      18.24         23.47
42776>      Dep. Storage     (mm)=       2.00          8.20
42777>      Average Slope     (%)=       1.10          1.10
42778>      Length            (m)=     527.32         85.00
42779>      Mannings n           =      0.015         0.350
42780>
42781>      Max.Eff.Inten.(mm/hr)=      82.92         28.64
42782>                    over (min)       10.00         35.00
42783>      Storage Coeff.  (min)=       7.91 (ii)    34.69 (ii)
42784>      Unit Hyd. Tpeak (min)=      10.00         35.00
42785>      Unit Hyd. peak  (cms)=       0.13          0.03
42786>                                                          *TOTALS*
42787>      PEAK FLOW       (cms)=       2.67          1.06          3.091 (iii)
42788>      TIME TO PEAK    (hrs)=       6.00          6.50          6.00
42789>      RUNOFF VOLUME    (mm)=      60.92         25.18         36.92
42790>      TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
42791>      RUNOFF COEFFICIENT   =       0.97          0.40          0.59
42792>
42793>
42794>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
42795>             CN*  =  75.6    Ia = Dep. Storage  (Above)
42796>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
42797>            THAN THE STORAGE COEFFICIENT.
42798>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
42799>
42800> ------------------------------------------------------------------------------
42801> --------------------
42802> | CALIB              |
42803> | STANDHYD ( 40900)|   Area    (ha)=  13.56
42804> |ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
42805> --------------------
42806>                                IMPERVIOUS    PERVIOUS (i)
42807>      Surface Area     (ha)=       8.41          5.15
42808>      Dep. Storage     (mm)=       1.00          7.00
42809>      Average Slope     (%)=       1.00          2.00
42810>      Length            (m)=     300.67         43.00
42811>      Mannings n           =      0.015         0.310
42812>
42813>      Max.Eff.Inten.(mm/hr)=      82.92         69.74
42814>                    over (min)        5.00         20.00
42815>      Storage Coeff.  (min)=       5.81 (ii)    15.49 (ii)
42816>      Unit Hyd. Tpeak (min)=       5.00         20.00
42817>      Unit Hyd. peak  (cms)=       0.20          0.07
42818>                                                          *TOTALS*
42819>      PEAK FLOW       (cms)=       1.42          0.53          1.800 (iii)
42820>      TIME TO PEAK    (hrs)=       6.00          6.17          6.00
42821>      RUNOFF VOLUME    (mm)=      61.92         30.48         45.57
42822>      TOTAL RAINFALL   (mm)=      62.92         62.92         62.92
42823>      RUNOFF COEFFICIENT   =       0.98          0.48          0.72
42824>
42825>
42826>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
42827>             CN*  =  78.2    Ia = Dep. Storage  (Above)
42828>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
42829>            THAN THE STORAGE COEFFICIENT.
42830>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
42831>
42832> ------------------------------------------------------------------------------
42833> --------------------
42834> | DUHYD    ( 90020)|
42835> | Inlet Cap.= 0.960|
42836> | #of Inlets=     1|
42837> | Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
42838> --------------------      (ha)     (cms)     (hrs)    (mm)
42839>      TOTAL HYD.(ID= 1):  13.56      1.80      6.00   45.57
42840>      ======================================================
```

```
      MAJOR SYS.(ID= 2):   1.30      0.84      6.00   45.57
      MINOR SYS.(ID= 3):  12.26      0.96      5.83   45.57

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71   3.091     6.00    36.92
      + ID2= 2 ( 50850):  1740.57  46.062     7.00    43.54
        ====================================================
        ID = 3 ( 50890):  1782.28  46.991     6.92    43.39

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1782.28  46.991     6.92    43.39
      + ID2= 2 ( 80880):    56.14   2.634     6.25    37.67
        ====================================================
        ID = 1 ( 50890):  1838.42  48.764     6.92    43.21

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  1838.42  48.764     6.92    43.21
      + ID2= 2 ( 90020):    12.26   0.960     5.83    45.57
        ====================================================
        ID = 3 ( 50890):  1850.68  49.004     6.83    43.23

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         79.05        0.0450
                    2.00         78.40        0.0450
                    4.00         77.75        0.0450
                    6.00         77.16        0.0450
                    8.00         76.78        0.0450
                   10.00         76.65        0.0450
                   12.00         76.60        0.0450
                   14.00         76.58        0.0450
                   16.00         76.08        0.0450
                   18.00         75.49    0.0450 /0.0350  Main Channel
                   20.00         75.46        0.0350      Main Channel
                   22.00         75.52    0.0350 /0.0450  Main Channel
                   24.00         76.15        0.0450
                   26.00         76.44        0.0450
                   28.00         76.56        0.0450
                   30.00         76.68        0.0450
                   32.00         76.86        0.0450
                   34.00         77.01        0.0450
                   36.00         77.10        0.0450
                   40.00         79.16        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.03    75.49    .127E+02        0.0         0.14      32.03
        0.22    75.68    .231E+03        0.6         0.69       6.29
        0.40    75.87    .510E+03        2.0         1.01       4.28
        0.59    76.05    .849E+03        4.1         1.25       3.45
        0.78    76.24    .125E+04        6.9         1.43       3.02
        0.97    76.43    .175E+04       10.6         1.57       2.75
        1.15    76.62    .240E+04       14.6         1.57       2.75
        1.34    76.80    .343E+04       21.1         1.60       2.71
        1.53    76.99    .465E+04       30.1         1.68       2.58
        1.71    77.18    .605E+04       41.3         1.77       2.44
        1.90    77.36    .754E+04       55.7         1.92       2.26
        2.09    77.55    .908E+04       72.1         2.06       2.10
        2.27    77.74    .107E+05       90.6         2.20       1.96
        2.46    77.92    .123E+05      111.1         2.34       1.84
        2.65    78.11    .140E+05      133.5         2.48       1.74
        2.84    78.30    .157E+05      157.9         2.61       1.66
        3.02    78.49    .175E+05      184.1         2.73       1.58
        3.21    78.67    .193E+05      212.1         2.85       1.52
        3.40    78.86    .211E+05      242.1         2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1850.68    49.00    6.83  43.23      1.81      1.85
   OUTFLOW: ID= 1 ( 60900) 1850.68    48.99    6.92  43.23      1.81      1.85

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

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--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area     (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77         2.15
     Dep. Storage     (mm)=       2.00         7.07
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     214.73        44.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=      82.92        83.23
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.05 (ii)   13.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.24         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.83         0.30          1.093 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      60.92        32.97          47.76
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.52           0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92    1.093     6.00    47.76
      + ID2= 2 ( 60900):  1850.68   48.993     6.92    43.23
        ====================================================
        ID = 3 ( 50910):  1857.60   49.096     6.92    43.24

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       1.70         1.00
     Length            (m)=      78.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=      82.92        54.89
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.03 (ii)    2.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.31         0.31
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.33         0.01          1.343 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      60.92        33.07          60.64
     TOTAL RAINFALL   (mm)=      62.92        62.92          62.92
     RUNOFF COEFFICIENT   =       0.97         0.53           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85    1.343     6.00    60.64
      + ID2= 2 (******):     0.00    0.000     6.67    42.15
        ====================================================
        ID = 3 (******):     5.85    1.343     6.00    60.64

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00    0.000     6.00    55.27
      + ID2= 2 (******):     0.00    0.000     6.67    42.15
        ====================================================
        ID = 3 (******):     0.00    0.000     6.67    42.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.00    0.000     6.67    42.47
      + ID2= 2 (******):     5.85    1.343     6.00    60.64
        ====================================================
        ID = 1 (******):     5.85    1.343     6.00    60.63

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         426.51       0.0450
                    0.98         426.14       0.0350      Main Channel
                    2.04         426.14       0.0350      Main Channel
                   20.51         426.51       0.0350      Main Channel

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   426.14    .579E+00        0.0         0.03     191.52
        0.02   426.16    .114E+02        0.0         0.14      39.52
        0.04   426.18    .285E+02        0.0         0.19      27.56
        0.06   426.20    .520E+02        0.0         0.24      22.17
        0.08   426.22    .818E+02        0.1         0.28      18.92
        0.10   426.24    .118E+03        0.1         0.32      16.68
        0.12   426.26    .161E+03        0.2         0.36      15.02
        0.14   426.27    .210E+03        0.3         0.39      13.73
        0.16   426.29    .265E+03        0.3         0.42      12.69
        0.18   426.31    .326E+03        0.5         0.45      11.82
        0.20   426.33    .394E+03        0.6         0.48      11.10
        0.22   426.35    .469E+03        0.7         0.51      10.47
        0.24   426.37    .549E+03        0.9         0.54       9.93
        0.26   426.39    .637E+03        1.1         0.56       9.46
        0.28   426.41    .730E+03        1.3         0.59       9.03
        0.30   426.43    .830E+03        1.6         0.62       8.65
        0.32   426.45    .936E+03        1.9         0.64       8.31
        0.34   426.47    .105E+04        2.2         0.67       8.01
        0.35   426.49    .117E+04        2.5         0.69       7.72

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    5.85     1.34    6.00  60.63      0.28      0.59
   OUTFLOW: ID= 1 (******)    5.85     1.15    6.00  60.63      0.26      0.57

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--------------------
| CALIB            |
| ROUTEPIPE(******)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
| DT=  5.0 min     |     Length        (m)= 372.00
--------------------     Slope       (m/m)=  0.004
                         Manning n        =  0.013

      <----------------- TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
         (m)     (cu.m.)      (cms)        (m/s)        min
        0.05    .423E+02        0.1         0.58       10.67
        0.09    .846E+02        0.2         0.90        6.89
        0.14    .127E+03        0.4         1.15        5.39
        0.19    .169E+03        0.6         1.36        4.55
        0.24    .211E+03        0.9         1.55        4.01
        0.28    .254E+03        1.2         1.71        3.63
        0.33    .296E+03        1.5         1.85        3.34
        0.38    .338E+03        1.8         1.99        3.12
        0.43    .381E+03        2.2         2.11        2.94
        0.47    .423E+03        2.5         2.22        2.80
        0.52    .465E+03        2.9         2.32        2.67
        0.57    .507E+03        3.3         2.41        2.57
        0.62    .550E+03        3.7         2.50        2.48
        0.66    .592E+03        4.1         2.58        2.40
        0.71    .634E+03        4.5         2.66        2.33
        0.76    .677E+03        5.0         2.73        2.27
        0.81    .719E+03        5.4         2.80        2.21
        0.85    .761E+03        5.9         2.86        2.17
        0.90    .804E+03        6.3         2.92        2.12

                                    <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    4.11     0.85    6.00  55.27      0.23      1.52
   OUTFLOW: ID= 1 (******)    4.11     0.83    6.00  55.27      0.23      1.50

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

     Unit Hyd Qpeak  (cms)=   0.774
```

```
      PEAK FLOW       (cms)=   0.500 (i)
      TIME TO PEAK    (hrs)=   6.250
      RUNOFF VOLUME    (mm)=  33.070
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.526

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.070

      PEAK FLOW       (cms)=   0.034 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  32.978
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.524

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.33   0.034     6.08    32.98
      + ID2= 2 (******):     7.90   0.500     6.25    33.07
        ================================================
        ID = 3 (******):     8.23   0.521     6.25    33.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.423

      PEAK FLOW       (cms)=   0.974 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  33.072
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.526

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

      Unit Hyd Qpeak  (cms)=   0.088

      PEAK FLOW       (cms)=   0.044 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  32.997
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.524

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    17.88   0.974     6.33    33.07
      + ID2= 2 (******):     0.44   0.044     6.08    33.00
        ================================================
        ID = 3 (******):    18.32   0.995     6.33    33.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

      Unit Hyd Qpeak  (cms)=   0.048

      PEAK FLOW       (cms)=   0.022 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  32.882
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.523

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.19   0.022     6.00    32.88
      + ID2= 2 (******):    18.32   0.995     6.33    33.07
        ================================================
        ID = 3 (******):    18.51   1.002     6.33    33.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    18.51   1.002     6.33    33.07
      + ID2= 2 (******):     8.23   0.521     6.25    33.07
        ================================================
        ID = 1 (******):    26.74   1.506     6.33    33.07

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    26.74   1.506     6.33    33.07
      + ID2= 2 (******):     4.11   0.831     6.00    55.27
        ================================================
        ID = 3 (******):    30.85   1.857     6.08    36.03

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    30.85   1.857     6.08    36.03
      + ID2= 2 (******):     5.85   1.146     6.00    60.63
        ================================================
        ID = 1 (******):    36.70   2.938     6.00    39.95

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
```

```
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        418.26        0.0450
                 40.58        417.27        0.0450
                 68.64        416.80        0.0450
                140.74        415.56        0.0450
                163.74        415.03    0.0450 /0.0350  Main Channel
                211.93        413.30        0.0350      Main Channel
                250.43        411.92        0.0350      Main Channel
                258.86        411.77        0.0350      Main Channel
                276.07        411.80        0.0350      Main Channel
                290.03        411.70        0.0350      Main Channel
                294.99        411.74        0.0350      Main Channel
                298.74        411.97        0.0350      Main Channel
                309.80        412.64        0.0350      Main Channel
                321.40        413.39        0.0350      Main Channel
                332.67        415.03    0.0350 /0.0450  Main Channel
                344.47        416.63        0.0450
                360.44        418.31        0.0450
                381.73        419.43        0.0450
                385.80        419.95        0.0450
                389.30        420.75        0.0450

     <---------------------- TRAVEL TIME TABLE ----------------------->
      DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.33   412.03    .115E+05       14.5         1.18      13.21
       0.67   412.36    .302E+05       61.5         1.91       8.18
       1.00   412.70    .535E+05      139.9         2.46       6.38
       1.33   413.03    .814E+05      252.5         2.91       5.37
       1.66   413.36    .114E+06      402.0         3.32       4.72
       2.00   413.70    .150E+06      597.3         3.74       4.19
       2.33   414.03    .190E+06      834.3         4.12       3.80
       2.66   414.36    .234E+06     1114.3         4.47       3.50
       2.99   414.69    .281E+06     1439.4         4.80       3.26
       3.33   415.03    .332E+06     1811.8         5.12       3.06
       3.69   415.39    .393E+06     2361.5         5.65       2.77
       4.05   415.75    .459E+06     2978.2         6.10       2.57
       4.41   416.10    .533E+06     3668.2         6.46       2.42
       4.76   416.46    .615E+06     4437.5         6.78       2.31
       5.12   416.82    .705E+06     5290.7         7.05       2.22
       5.48   417.18    .804E+06     6232.2         7.29       2.15
       5.84   417.54    .910E+06     7276.0         7.51       2.08
       6.20   417.90    .102E+07     8417.1         7.74       2.02
       6.56   418.26    .114E+07     9654.5         7.95       1.97

                                              <---- hydrograph ---->   <-pipe / channel->
                                    AREA    QPEAK    TPEAK    R.V.   MAX DEPTH   MAX VEL
                                    (ha)    (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)         36.70     2.94     6.00   39.95      0.07       1.18
   OUTFLOW: ID= 1 (******)         36.70     2.18     6.25   39.95      0.05       1.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

      Unit Hyd Qpeak  (cms)=   2.154

      PEAK FLOW       (cms)=   1.532 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  33.073
      TOTAL RAINFALL   (mm)=  62.921
      RUNOFF COEFFICIENT   =   0.526

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    31.02   1.532     6.42    33.07
      + ID2= 2 (******):    36.70   2.176     6.25    39.95
        ================================================
        ID = 3 (******):    67.72   3.633     6.33    36.80

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                    *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
  Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9

DATE: 02/19/2026                          TIME: 06:03:47

USER:


COMMENTS: _____________________________________________________

--------------------------------------------------------------------------------
  ***********************************************
  ** SIMULATION : 50 Year 12 hr 5 min SCS Type  **
  ***********************************************

--------------------
|    READ STORM    |    Filename: C:\Users\DPham\AppD
|                  |              ata\Local\Temp\
|                  |              10fc3edb-a74b-4f10-8c03-341fce89bc9e\0131b2a2
| Ptotal= 93.81 mm |    Comments: 50 Year 12 hr 5 min SCS Type II CC
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    2.34 |  3.08    3.75 |  6.17   16.86 |  9.25    3.28
                0.08    2.34 |  3.17    3.75 |  6.25   16.86 |  9.33    3.28
                0.17    2.34 |  3.25    3.75 |  6.33   16.86 |  9.42    3.28
                0.25    2.34 |  3.33    3.75 |  6.42   16.86 |  9.50    3.28
                0.33    2.34 |  3.42    3.75 |  6.50    7.49 |  9.58    3.28
                0.42    2.34 |  3.50    3.75 |  6.58    7.49 |  9.67    3.28
                0.50    2.34 |  3.58    3.75 |  6.67    7.49 |  9.75    3.28
                0.58    2.34 |  3.67    3.75 |  6.75    7.49 |  9.83    3.28
                0.67    2.34 |  3.75    3.75 |  6.83    7.49 |  9.92    3.28
                0.75    2.34 |  3.83    3.75 |  6.92    7.49 | 10.00    1.87
                0.83    2.34 |  3.92    3.75 |  7.00    5.62 | 10.08    1.87
                0.92    2.34 |  4.00    5.62 |  7.08    5.62 | 10.17    1.87
                1.00    2.34 |  4.08    5.62 |  7.17    5.62 | 10.25    1.87
                1.08    2.34 |  4.17    5.62 |  7.25    5.62 | 10.33    1.87
                1.17    2.34 |  4.25    5.62 |  7.33    5.62 | 10.42    1.87
                1.25    2.34 |  4.33    5.62 |  7.42    5.62 | 10.50    1.87
                1.33    2.34 |  4.42    5.62 |  7.50    5.62 | 10.58    1.87
                1.42    2.34 |  4.50    7.49 |  7.58    5.62 | 10.67    1.87
                1.50    2.34 |  4.58    7.49 |  7.67    5.62 | 10.75    1.87
                1.58    2.34 |  4.67    7.49 |  7.75    5.62 | 10.83    1.87
                1.67    2.34 |  4.75    7.49 |  7.83    5.62 | 10.92    1.87
```

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                1.75    2.34 |  4.83    7.49 |  7.92    5.62 | 11.00    1.87
                1.83    2.34 |  4.92    7.49 |  8.00    3.28 | 11.08    1.87
                1.92    2.34 |  5.00   11.24 |  8.08    3.28 | 11.17    1.87
                2.00    2.81 |  5.08   11.24 |  8.17    3.28 | 11.25    1.87
                2.08    2.81 |  5.17   11.24 |  8.25    3.28 | 11.33    1.87
                2.17    2.81 |  5.25   11.24 |  8.33    3.28 | 11.42    1.87
                2.25    2.81 |  5.33   11.24 |  8.42    3.28 | 11.50    1.87
                2.33    2.81 |  5.42   11.24 |  8.50    3.28 | 11.58    1.87
                2.42    2.81 |  5.50   44.95 |  8.58    3.28 | 11.67    1.87
                2.50    2.81 |  5.58   44.95 |  8.67    3.28 | 11.75    1.87
                2.58    2.81 |  5.67   44.95 |  8.75    3.28 | 11.83    1.87
                2.67    2.81 |  5.75  123.62 |  8.83    3.28 | 11.92    1.87
                2.75    2.81 |  5.83  123.62 |  8.92    3.28 | 12.00    1.87
                2.83    2.81 |  5.92  123.62 |  9.00    3.28 |
                2.92    2.81 |  6.00   16.86 |  9.08    3.28 |
                3.00    3.75 |  6.08   16.86 |  9.17    3.28 |

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--------------------
| CALIB            |
| NASHYD   ( 40010)|   Area    (ha)=  43.09   Curve Number   (CN)= 79.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.41   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.47

     Unit Hyd Qpeak  (cms)=   3.502

     PEAK FLOW       (cms)=   3.498 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  48.327
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.515

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   ( 40030)|   Area    (ha)=  54.88   Curve Number   (CN)= 79.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.34   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   4.557

     PEAK FLOW       (cms)=   4.516 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  48.216
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.514

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50010)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40010):    43.09   3.498     6.33    48.33
     + ID2= 2 ( 60010):    54.88   4.516     6.33    48.22
       ================================================
       ID = 3 ( 50010):    97.97   8.014     6.33    48.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60010)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        160.98        0.0450
                  10.00        160.83        0.0450
                  20.00        160.72        0.0450
                  30.00        160.67        0.0450
                  40.00        160.61        0.0450
                  50.00        160.60        0.0450
                  60.00        160.55        0.0450
                  70.00        160.65        0.0450
                  80.00        159.78        0.0450
                  90.00        157.33    0.0450 /0.0350  Main Channel
                 100.00        157.18        0.0350      Main Channel
                 110.00        158.55        0.0450
                 120.00        160.34        0.0450
                 130.00        160.29        0.0450
                 140.00        160.30        0.0450
                 150.00        160.38        0.0450
                 160.00        160.53        0.0450
                 170.00        160.58        0.0450
                 180.00        160.51        0.0450
                 190.00        160.53        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15  157.33    .123E+04        0.4         0.43      57.39
        0.32  157.50    .422E+04        2.5         0.88      27.82
        0.49  157.67    .768E+04        6.3         1.20      20.47
        0.66  157.83    .116E+05       11.5         1.45      16.89
        0.83  158.00    .160E+05       18.2         1.67      14.70
        0.99  158.17    .209E+05       26.5         1.86      13.18
        1.16  158.34    .263E+05       36.3         2.03      12.06
        1.33  158.51    .321E+05       47.9         2.19      11.18
        1.50  158.68    .384E+05       62.7         2.40      10.21
        1.67  158.84    .451E+05       79.9         2.60       9.41
        1.84  159.01    .522E+05       99.0         2.79       8.79
        2.00  159.18    .597E+05      120.2         2.96       8.28
        2.17  159.35    .676E+05      143.3         3.11       7.86
        2.34  159.52    .759E+05      168.5         3.26       7.51
        2.51  159.69    .846E+05      195.8         3.40       7.20
        2.68  159.86    .938E+05      224.4         3.52       6.97
        2.85  160.02    .104E+06      254.6         3.61       6.78
        3.02  160.19    .114E+06      287.5         3.70       6.62
        3.18  160.36    .127E+06      315.8         3.64       6.72

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50010)   97.97     8.01    6.33  48.26      0.54      1.27
   OUTFLOW: ID= 1 ( 60010)   97.97     6.82    6.58  48.26      0.51      1.22

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--------------------
| CALIB            |
| STANDHYD ( 40020)|   Area    (ha)=  51.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      33.87        17.45
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     584.91        50.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     123.62       119.45
                   over (min)      5.00        20.00
     Storage Coeff.  (min)=       6.82 (ii)   16.17 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       9.14         3.14        11.422 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81        56.75         76.38
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.60          0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        153.66        0.0450
                   1.00        153.24        0.0450
                   2.00        152.95        0.0450
                   3.00        152.70        0.0450
                   4.00        152.40        0.0450
                   5.00        152.09        0.0450
                   6.00        151.83        0.0450
                   7.00        151.60        0.0450
                   8.00        151.49    0.0450 /0.0350  Main Channel
                   9.00        151.42        0.0350      Main Channel
                  10.00        151.38        0.0350      Main Channel
                  11.00        151.40        0.0350      Main Channel
                  12.00        151.38        0.0350      Main Channel
                  13.00        151.38        0.0350      Main Channel
                  14.00        151.38        0.0350      Main Channel
                  15.00        151.50    0.0350 /0.0450  Main Channel
                  16.00        151.56        0.0450
                  17.00        151.60        0.0450
                  25.00        153.59        0.0450
                  26.00        153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  151.49    .140E+03        0.2         0.36      10.54
        0.23  151.60    .355E+03        0.9         0.58       6.57
        0.34  151.72    .624E+03        2.0         0.74       5.11
        0.45  151.83    .916E+03        3.6         0.89       4.27
        0.57  151.94    .123E+04        5.5         1.02       3.73
        0.68  152.05    .157E+04        7.8         1.13       3.35
        0.79  152.17    .193E+04       10.5         1.24       3.06
        0.90  152.28    .231E+04       13.6         1.34       2.83
        1.02  152.39    .271E+04       17.1         1.43       2.65
        1.13  152.50    .314E+04       20.9         1.52       2.50
        1.24  152.62    .358E+04       25.2         1.60       2.37
        1.35  152.73    .405E+04       29.8         1.67       2.26
        1.47  152.84    .454E+04       34.9         1.75       2.17
        1.58  152.95    .505E+04       40.3         1.81       2.09
        1.69  153.07    .558E+04       46.2         1.88       2.01
        1.80  153.18    .614E+04       52.6         1.95       1.95
        1.92  153.29    .672E+04       59.4         2.01       1.88
        2.03  153.40    .731E+04       66.7         2.07       1.83
        2.14  153.52    .793E+04       74.5         2.14       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50020)   149.29    12.72    6.00  57.93      0.87      1.31
   OUTFLOW: ID= 1 ( 60020)   149.29    11.91    6.00  57.93      0.84      1.28

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--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31        18.38
     Dep. Storage     (mm)=       2.00         6.00
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     686.45        52.00
     Mannings n           =      0.015        0.280

     Max.Eff.Inten.(mm/hr)=     123.62       150.38
                   over (min)     10.00        20.00
     Storage Coeff.  (min)=       7.69 (ii)   16.45 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.13         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=      12.40         4.19        15.475 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81        60.89         79.44
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.65          0.85

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40040):    70.68  15.475     6.00    79.44
     + ID2= 2 ( 60020):   149.29  11.913     6.00    57.93
       ================================================
       ID = 3 ( 50220):   219.97  27.388     6.00    64.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000  |    3.4010      4.4390
                           0.0530      0.4910  |    4.8380      5.0560
                           0.0890      0.7040  |    5.8470      5.5380
                           0.2040      1.0890  |    6.5980      5.9190
                           0.3240      1.4800  |    7.2560      6.2250
                           0.3890      1.7490  |    7.9030      6.4820
                           0.4470      1.9970  |    8.4910      6.6820
                           0.5090      2.3490  |   12.0680      7.1150
                           0.7420      2.9150  |   20.0000      7.2000
                           1.7580      3.6690  |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50220)    219.973    27.388      6.00      64.84
   OUTFLOW: ID= 1 ( 70010)    219.973     8.790      7.00      64.82
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 32.09
                  TIME SHIFT OF PEAK FLOW          (min)= 60.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  6.7215

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   --------------------------
   | Junction Command(70011) |
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                            AREA     QPEAK   TPEAK     R.V.
                            (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70010)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70011)    0.00      0.00    0.00      0.00

  ------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70011 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 ( 70010):   219.97   8.790     7.00    64.82
      + ID2= 2 ( 70011):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 70012):   219.97   8.790     7.00    64.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         148.49        0.0450
                   3.00         148.12        0.0450
                   6.00         148.07        0.0450
                   9.00         147.63        0.0450
                  12.00         147.56        0.0450
                  15.00         147.55        0.0450
                  18.00         147.46        0.0450
                  21.00         147.41        0.0450
                  24.00         147.36        0.0450
                  27.00         147.38        0.0450
                  30.00         147.22        0.0450
                  33.00         147.00        0.0450
                  36.00         146.34        0.0450
                  39.00         145.57        0.0350      Main Channel
                  42.00         145.39        0.0350      Main Channel
                  45.00         145.66        0.0350      Main Channel
                  48.00         146.68        0.0450
                  51.00         147.50        0.0450
                  55.00         148.22        0.0450
                  60.00         148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  145.48    .145E+03        0.0         0.25      83.65
        0.18  145.57    .581E+03        0.2         0.40      52.70
        0.35  145.74    .189E+04        1.1         0.73      29.09
        0.52  145.91    .348E+04        2.7         0.99      21.52
        0.68  146.07    .532E+04        5.0         1.19      17.84
        0.85  146.24    .740E+04        7.9         1.36      15.60
        1.02  146.41    .973E+04       11.5         1.51      14.07
        1.19  146.58    .123E+05       15.9         1.64      12.94
        1.35  146.74    .152E+05       21.2         1.78      11.93
        1.52  146.91    .183E+05       27.8         1.94      10.99
        1.69  147.08    .218E+05       35.0         2.05      10.39
        1.86  147.25    .259E+05       43.0         2.12      10.03
        2.02  147.41    .309E+05       50.6         2.09      10.18
        2.19  147.58    .383E+05       61.5         2.05      10.37
        2.36  147.75    .474E+05       77.1         2.07      10.25
        2.52  147.91    .571E+05       95.6         2.14       9.95
        2.69  148.08    .672E+05      116.0         2.20       9.65
        2.86  148.25    .783E+05      138.1         2.25       9.45
        3.03  148.42    .904E+05      163.4         2.31       9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 70012)   219.97     8.79    7.00  64.82      0.89      1.40
  OUTFLOW: ID= 1 ( 60040)   219.97     8.40    7.17  64.82      0.87      1.38


------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94         19.34
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       3.30          3.30
     Length            (m)=     590.36         68.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62        134.62
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.19 (ii)    12.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       8.48          4.58       12.547 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=      91.81         60.50       75.84
     TOTAL RAINFALL   (mm)=      93.81         93.81       93.81
     RUNOFF COEFFICIENT   =       0.98          0.64        0.81


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40050):    52.28  12.547     6.00    75.84
      + ID2= 2 ( 60040):   219.97   8.402     7.17    64.82
        ================================================
        ID = 3 ( 50040):   272.25  13.008     6.00    66.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         146.35        0.0450
                 16.00         145.17        0.0450
                 18.00         144.62        0.0450
                 20.00         143.50        0.0450
                 26.00         141.63        0.0350      Main Channel
                 30.00         142.17        0.0350      Main Channel
                 34.00         144.28        0.0450
                 38.00         145.27        0.0450
                 50.00         146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25  141.88    .129E+03        0.2         0.54      12.17
        0.50  142.13    .516E+03        1.1         0.86       7.67
        0.74  142.38    .111E+04        3.4         1.21       5.42
        0.99  142.63    .184E+04        7.0         1.50       4.37
        1.24  142.87    .269E+04       11.9         1.75       3.76
        1.49  143.12    .366E+04       18.2         1.96       3.36
        1.74  143.37    .476E+04       25.9         2.15       3.06
        1.98  143.62    .597E+04       35.3         2.33       2.82
        2.23  143.87    .729E+04       46.5         2.52       2.61
        2.48  144.11    .869E+04       59.3         2.69       2.44
        2.73  144.36    .102E+05       74.3         2.88       2.28
        2.97  144.61    .118E+05       92.4         3.09       2.13
        3.22  144.86    .136E+05      111.6         3.24       2.03
        3.47  145.11    .156E+05      133.1         3.37       1.95
        3.72  145.35    .178E+05      152.6         3.38       1.94
        3.97  145.60    .206E+05      175.6         3.37       1.95
        4.21  145.85    .239E+05      204.3         3.37       1.95
        4.46  146.10    .279E+05      238.6         3.38       1.95
        4.71  146.35    .324E+05      279.0         3.40       1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 50040)   272.25    13.01    6.00  66.94      1.28      1.78
  OUTFLOW: ID= 1 ( 60050)   272.25    11.94    6.00  66.94      1.24      1.75


------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         142.52        0.0450
                  2.00         142.41        0.0450
                  4.00         142.26        0.0450
                  6.00         142.08        0.0450
                  8.00         141.85        0.0450
                 10.00         141.61        0.0450
                 12.00         141.38        0.0450
                 14.00         141.11        0.0450
                 16.00         140.93        0.0450
                 18.00         140.83        0.0450
                 20.00         140.73        0.0350      Main Channel
                 22.00         140.55        0.0350      Main Channel
                 24.00         140.49        0.0350      Main Channel
                 26.00         140.65        0.0350      Main Channel
                 28.00         141.04        0.0450
                 30.00         141.72        0.0450
                 32.00         142.19        0.0450
                 40.00         142.50        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08  140.57    .466E+02        0.0         0.23      24.59
        0.15  140.65    .155E+03        0.2         0.38      14.98
        0.23  140.73    .305E+03        0.5         0.51      11.12
        0.34  140.84    .598E+03        1.2         0.68       8.29
        0.45  140.95    .995E+03        2.3         0.80       7.09
        0.56  141.06    .147E+04        3.9         0.91       6.22
        0.68  141.17    .201E+04        6.1         1.04       5.45
        0.79  141.28    .259E+04        8.8         1.16       4.89
        0.90  141.39    .321E+04       12.0         1.27       4.47
        1.01  141.50    .389E+04       15.6         1.36       4.16
        1.12  141.61    .461E+04       19.7         1.45       3.90
        1.23  141.72    .537E+04       24.3         1.54       3.69
        1.34  141.84    .619E+04       29.4         1.61       3.52
        1.45  141.95    .707E+04       35.0         1.68       3.37
        1.56  142.06    .799E+04       41.1         1.75       3.24
        1.67  142.17    .898E+04       47.8         1.81       3.13
        1.79  142.28    .101E+05       54.6         1.85       3.07
        1.90  142.39    .113E+05       62.1         1.87       3.03
        2.01  142.50    .127E+05       70.3         1.88       3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 60050)   272.25    11.94    6.00  66.94      0.90      1.27
  OUTFLOW: ID= 1 ( 60060)   272.25    11.39    6.08  66.94      0.88      1.25


------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94          1.90
     Dep. Storage     (mm)=       2.00          7.70
     Average Slope     (%)=       2.60          2.60
     Length            (m)=     137.56         98.00
     Mannings n           =      0.015         0.320

     Max.Eff.Inten.(mm/hr)=     123.62         98.53
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       2.32 (ii)    15.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.30          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.30        0.474 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17        6.00
     RUNOFF VOLUME    (mm)=      91.81         56.57       65.83
     TOTAL RAINFALL   (mm)=      93.81         93.81       93.81
     RUNOFF COEFFICIENT   =       0.98          0.60        0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40060):     2.84   0.474     6.00    65.83
      + ID2= 2 ( 60060):   272.25  11.392     6.08    66.94
        ================================================
        ID = 3 ( 50070):   275.09  11.732     6.08    66.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40080)|   Area    (ha)=  39.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      26.30         13.55
     Dep. Storage     (mm)=       2.00          5.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     515.42         72.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62        125.99
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       6.18 (ii)    16.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.19          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       6.96          2.66        8.900 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17        6.00
     RUNOFF VOLUME    (mm)=      91.81         60.13       77.24
     TOTAL RAINFALL   (mm)=      93.81         93.81       93.81
     RUNOFF COEFFICIENT   =       0.98          0.64        0.82


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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44065>
44066> --------------------
44067> | ADD HYD  ( 50080)|
44068> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
44069> --------------------           (ha)    (cms)    (hrs)     (mm)
44070>         ID1= 1 ( 40080):    39.85   8.900     6.00    77.24
44071>       + ID2= 2 ( 50070):   275.09  11.732     6.08    66.93
44072>         ==================================================
44073>         ID = 3 ( 50080):   314.94  19.510     6.00    68.23
44074>
44075>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44076> ------------------------------------------------------------------------------
44077> --------------------
44078> | ROUTE CHN( 60080)|
44079> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
44080> --------------------
44081>                <------ DATA FOR SECTION (   1.1) ------>
44082>                Distance      Elevation       Manning
44083>                    0.00        141.24        0.0450
44084>                   40.00        140.58        0.0450
44085>                   50.00        140.57        0.0450
44086>                   60.00        140.36        0.0450
44087>                   70.00        140.19        0.0450
44088>                   80.00        140.15        0.0450
44089>                   90.00        139.70        0.0450
44090>                  100.00        139.54        0.0350      Main Channel
44091>                  110.00        139.97        0.0450
44092>                  120.00        140.53        0.0450
44093>                  130.00        140.63        0.0450
44094>                  140.00        140.72        0.0450
44095>                  150.00        140.87        0.0450
44096>                  190.00        141.16        0.0450
44097>
44098>       <---------------------- TRAVEL TIME TABLE ----------------------->
44099>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
44100>          (m)     (m)     (cu.m.)      (cms)       (m/s)       (min)
44101>         0.09   139.63    .150E+03        0.1        0.18       43.53
44102>         0.17   139.71    .598E+03        0.4        0.30       27.01
44103>         0.26   139.80    .126E+04        1.1        0.42       19.24
44104>         0.34   139.88    .209E+04        2.2        0.52       15.58
44105>         0.43   139.97    .307E+04        3.8        0.60       13.36
44106>         0.51   140.05    .420E+04        6.1        0.70       11.45
44107>         0.60   140.14    .548E+04        9.0        0.79       10.19
44108>         0.68   140.22    .714E+04       11.3        0.76       10.55
44109>         0.77   140.31    .919E+04       15.7        0.82        9.77
44110>         0.85   140.39    .115E+05       21.0        0.88        9.11
44111>         0.94   140.48    .141E+05       27.4        0.94        8.54
44112>         1.02   140.56    .169E+05       34.6        0.99        8.12
44113>         1.11   140.65    .205E+05       41.1        0.97        8.32
44114>         1.19   140.74    .248E+05       51.5        1.00        8.02
44115>         1.28   140.82    .296E+05       64.0        1.04        7.70
44116>         1.36   140.91    .348E+05       78.0        1.08        7.44
44117>         1.45   140.99    .407E+05       93.6        1.11        7.24
44118>         1.53   141.08    .472E+05      111.7        1.14        7.05
44119>         1.62   141.16    .545E+05      132.2        1.17        6.87
44120>
44121>                                    <---- hydrograph ---->   <-pipe / channel->
44122>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
44123>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
44124>    INFLOW : ID= 2 ( 50080)  314.94    19.51    6.00  68.23      0.83      0.86
44125>    OUTFLOW: ID= 1 ( 60080)  314.94    15.76    6.17  68.23      0.77      0.82
44126>
44127>
44128>
44129> ------------------------------------------------------------------------------
44130> --------------------
44131> | CALIB            |
44132> | STANDHYD ( 40090)|   Area     (ha)=   4.45
44133> |ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
44134> --------------------
44135>                                IMPERVIOUS    PERVIOUS (i)
44136>      Surface Area     (ha)=       0.99         3.46
44137>      Dep. Storage     (mm)=       2.00         9.68
44138>      Average Slope     (%)=       2.40         2.40
44139>      Length            (m)=     172.19        99.00
44140>      Mannings n           =      0.015        0.370
44141>
44142>      Max.Eff.Inten.(mm/hr)=     123.62        67.93
44143>                   over (min)        5.00        20.00
44144>      Storage Coeff.  (min)=       2.72 (ii)   19.72 (ii)
44145>      Unit Hyd. Tpeak (min)=       5.00        20.00
44146>      Unit Hyd. peak  (cms)=       0.29         0.06
44147>                                                          *TOTALS*
44148>      PEAK FLOW       (cms)=       0.21         0.41          0.491 (iii)
44149>      TIME TO PEAK    (hrs)=       6.00         6.17           6.00
44150>      RUNOFF VOLUME    (mm)=      91.81        47.30          53.42
44151>      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
44152>      RUNOFF COEFFICIENT   =       0.98         0.50           0.57
44153>
44154> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
44155> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
44156>               YOU SHOULD CONSIDER SPLITTING THE AREA.
44157>
44158>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
44159>            CN*  =  77.1    Ia = Dep. Storage  (Above)
44160>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
44161>            THAN THE STORAGE COEFFICIENT.
44162>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44163>
44164> ------------------------------------------------------------------------------
44165>
44166> --------------------
44167> | ADD HYD  ( 50090)|
44168> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
44169> --------------------           (ha)    (cms)    (hrs)     (mm)
44170>         ID1= 1 ( 40090):     4.45    0.491     6.00    53.42
44171>       + ID2= 2 ( 60080):   314.94   15.755     6.17    68.23
44172>         ==================================================
44173>         ID = 3 ( 50090):   319.39   16.196     6.17    68.02
44174>
44175>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44176> ------------------------------------------------------------------------------
44177> --------------------
44178> | ROUTE CHN( 60100)|
44179> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
44180> --------------------
44181>                <------ DATA FOR SECTION (   1.1) ------>
44182>                Distance      Elevation       Manning
44183>                    0.00        138.71        0.0450
44184>                    4.00        136.97        0.0450
44185>                   28.00        135.94        0.0450
44186>                   32.00        135.79        0.0350      Main Channel
44187>                   36.00        135.23        0.0350      Main Channel
44188>                   40.00        135.71    0.0350 /0.0450  Main Channel
44189>                   54.00        136.96        0.0450
44190>                   80.00        138.63        0.0450
44191>
44192>       <---------------------- TRAVEL TIME TABLE ----------------------->
44193>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
44194>          (m)     (m)     (cu.m.)      (cms)       (m/s)       (min)
44195>         0.16   135.39    .631E+02        0.1        0.44       12.42
44196>         0.31   135.55    .253E+03        0.5        0.69        7.83
44197>         0.47   135.71    .568E+03        1.6        0.91        5.97
44198>         0.65   135.89    .114E+04        4.2        1.20        4.52
44199>         0.84   136.07    .209E+04        8.7        1.35        4.02
44200>         1.02   136.25    .342E+04       15.4        1.47        3.70
44201>         1.20   136.44    .511E+04       24.8        1.58        3.44
44202>         1.38   136.62    .718E+04       37.2        1.69        3.21
44203>         1.57   136.80    .962E+04       53.1        1.79        3.02
44204>         1.75   136.98    .124E+05       72.7        1.90        2.85
44205>         1.93   137.17    .155E+05       97.8        2.05        2.64
44206>         2.11   137.35    .188E+05      127.1        2.20        2.47
44207>         2.30   137.53    .223E+05      160.4        2.34        2.31
44208>         2.48   137.71    .259E+05      197.8        2.48        2.19
44209>         2.66   137.90    .298E+05      239.5        2.61        2.07
44210>         2.85   138.08    .339E+05      285.4        2.74        1.98
44211>         3.03   138.26    .381E+05      335.6        2.86        1.89
44212>         3.21   138.44    .426E+05      390.3        2.98        1.82
44213>         3.39   138.63    .472E+05      449.4        3.10        1.75
44214>
44215>                                    <---- hydrograph ---->   <-pipe / channel->
44216>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
44217>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
44218>    INFLOW : ID= 2 ( 50090)  319.39    16.20    6.17  68.02      1.03      1.48
44219>    OUTFLOW: ID= 1 ( 60100)  319.39    15.86    6.17  68.02      1.03      1.47
44220>
44221>
44222>
44223> ------------------------------------------------------------------------------
44224> --------------------
44225> | CALIB            |
44226> | STANDHYD ( 40100)|   Area     (ha)=  26.90
44227> |ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
44228> --------------------
44229>                                IMPERVIOUS    PERVIOUS (i)
44230>      Surface Area     (ha)=      12.46        14.44
44231>      Dep. Storage     (mm)=       2.00         6.20
44232>      Average Slope     (%)=       1.40         1.40
44233>      Length            (m)=     423.45       125.00
44234>      Mannings n           =      0.015        0.280
44235>
44236>      Max.Eff.Inten.(mm/hr)=     123.62        78.65
44237>                   over (min)        5.00        25.00
44238>      Storage Coeff.  (min)=       5.50 (ii)   23.83 (ii)
44239>      Unit Hyd. Tpeak (min)=       5.00        25.00
44240>      Unit Hyd. peak  (cms)=       0.20         0.05
44241>                                                          *TOTALS*
44242>      PEAK FLOW       (cms)=       3.75         1.75          4.820 (iii)
44243>      TIME TO PEAK    (hrs)=       6.00         6.25           6.00
44244>      RUNOFF VOLUME    (mm)=      91.81        56.79          71.65
44245>      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
44246>      RUNOFF COEFFICIENT   =       0.98         0.61           0.76
44247>
44248>
44249>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
44250>            CN*  =  83.0    Ia = Dep. Storage  (Above)
44251>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
44252>            THAN THE STORAGE COEFFICIENT.
44253>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44254>
44255> ------------------------------------------------------------------------------
44256>
44257> --------------------
44258> | ADD HYD  ( 50110)|
44259> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
44260> --------------------           (ha)    (cms)    (hrs)     (mm)
44261>         ID1= 1 ( 40100):    26.90   4.820     6.00    71.65
44262>       + ID2= 2 ( 60100):   319.39  15.857     6.17    68.02
44263>         ==================================================
44264>         ID = 3 ( 50110):   346.28  18.548     6.17    68.31
44265>
44266>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44267> ------------------------------------------------------------------------------
44268> --------------------
44269> | CALIB            |
44270> | NASHYD   ( 40120)|   Area     (ha)=  44.60   Curve Number   (CN)= 80.8
44271> |ID= 1 DT= 5.0 min |   Ia       (mm)=   7.89   # of Linear Res.(N)= 3.00
44272> --------------------   U.H. Tp(hrs)=   0.43
44273>
44274>      Unit Hyd Qpeak  (cms)=   3.961
44275>
44276>      PEAK FLOW       (cms)=   4.038 (i)
44277>      TIME TO PEAK    (hrs)=   6.333
44278>      RUNOFF VOLUME    (mm)=  50.528
44279>      TOTAL RAINFALL   (mm)=  93.808
44280>      RUNOFF COEFFICIENT   =   0.539
44281>
44282>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44283>
44284> ------------------------------------------------------------------------------
44285> --------------------
44286> | CALIB            |
44287> | NASHYD   ( 40130)|   Area     (ha)=  63.82   Curve Number   (CN)= 82.7
44288> |ID= 1 DT= 5.0 min |   Ia       (mm)=   7.55   # of Linear Res.(N)= 3.00
44289> --------------------   U.H. Tp(hrs)=   0.50
44290>
44291>      Unit Hyd Qpeak  (cms)=   4.875
44292>
44293>      PEAK FLOW       (cms)=   5.506 (i)
44294>      TIME TO PEAK    (hrs)=   6.417
44295>      RUNOFF VOLUME    (mm)=  53.375
44296>      TOTAL RAINFALL   (mm)=  93.808
44297>      RUNOFF COEFFICIENT   =   0.569
44298>
44299>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44300>
44301> ------------------------------------------------------------------------------
44302>
44303> --------------------
44304> | ADD HYD  ( 50130)|
44305> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
44306> --------------------           (ha)    (cms)    (hrs)     (mm)
44307>         ID1= 1 ( 40120):    44.60   4.038     6.33    50.53
44308>       + ID2= 2 ( 40130):    63.82   5.506     6.42    53.37
44309>         ==================================================
44310>         ID = 3 ( 50130):   108.42   9.534     6.33    52.20
44311>
44312>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44313> ------------------------------------------------------------------------------
44314> --------------------
44315> | ROUTE CHN( 60130)|
44316> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
44317> --------------------
44318>                <------ DATA FOR SECTION (   1.1) ------>
44319>                Distance      Elevation       Manning
44320>                    0.00        155.27        0.0450
44321>                    2.00        155.23        0.0450
44322>                    4.00        155.21        0.0450
44323>                    6.00        155.08        0.0450
44324>                    8.00        154.94        0.0450
44325>                   10.00        154.68        0.0450
44326>                   12.00        154.21        0.0450
44327>                   14.00        153.90        0.0450
44328>                   16.00        153.41        0.0350      Main Channel
44329>                   18.00        153.58        0.0350      Main Channel
44330>                   20.00        153.72    0.0350 /0.0450  Main Channel
44331>                   22.00        153.77        0.0450
44332>                   24.00        153.77        0.0450
44333>                   26.00        153.82        0.0450
44334>                   28.00        153.79        0.0450
44335>                   30.00        153.87        0.0450
44336>                   32.00        153.99        0.0450
44337>                   34.00        154.44        0.0450
44338>                   36.00        154.86        0.0450
44339>                   40.00        155.37        0.0450
44340>
44341>       <---------------------- TRAVEL TIME TABLE ----------------------->
44342>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
44343>          (m)     (m)     (cu.m.)      (cms)       (m/s)       (min)
44344>         0.10   153.50    .107E+03        0.0        0.27       87.23
44345>         0.20   153.60    .429E+03        0.1        0.42       55.65
44346>         0.29   153.70    .991E+03        0.4        0.55       42.98
44347>         0.39   153.80    .201E+04        0.9        0.66       35.52
44348>         0.49   153.90    .408E+04        2.1        0.71       33.15
44349>         0.59   153.99    .651E+04        3.7        0.81       29.01
44350>         0.69   154.09    .916E+04        6.1        0.93       25.22
44351>         0.79   154.19    .120E+05        8.9        1.05       22.39
44352>         0.88   154.29    .149E+05       12.3        1.16       20.20
44353>         0.98   154.39    .179E+05       16.2        1.27       18.49
44354>         1.08   154.49    .211E+05       20.5        1.37       17.13
44355>         1.18   154.58    .244E+05       25.4        1.47       16.02
44356>         1.28   154.68    .278E+05       30.7        1.56       15.10
44357>         1.37   154.78    .314E+05       36.4        1.63       14.38
44358>         1.47   154.88    .351E+05       42.5        1.71       13.77
44359>         1.57   154.98    .391E+05       48.9        1.76       13.33
44360>         1.67   155.07    .433E+05       55.6        1.81       12.98
44361>         1.77   155.17    .478E+05       63.0        1.86       12.65
44362>         1.86   155.27    .528E+05       69.8        1.86       12.62
44363>
44364>                                    <---- hydrograph ---->   <-pipe / channel->
44365>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
44366>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
44367>    INFLOW : ID= 2 ( 50130)  108.42     9.53    6.33  52.20      0.80      1.07
44368>    OUTFLOW: ID= 1 ( 60130)  108.42     7.61    6.67  52.20      0.74      0.99
44369>
44370>
```

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44371>
44372> ---------------------------------------------------------------------------------
44373> --------------------
44374> | CALIB            |
44375> | STANDHYD ( 40140)|   Area    (ha)=  65.76
44376> |ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
44377> --------------------
44378>                              IMPERVIOUS    PERVIOUS (i)
44379>      Surface Area     (ha)=      46.69         19.07
44380>      Dep. Storage     (mm)=       2.00          6.30
44381>      Average Slope     (%)=       1.30          1.30
44382>      Length            (m)=     662.12         66.00
44383>      Mannings n           =      0.015         0.290
44384>
44385>      Max.Eff.Inten.(mm/hr)=     123.62        118.93
44386>                    over (min)        5.00         20.00
44387>      Storage Coeff.  (min)=       7.35 (ii)    18.41 (ii)
44388>      Unit Hyd. Tpeak (min)=       5.00         20.00
44389>      Unit Hyd. peak  (cms)=       0.17          0.06
44390>                                                      *TOTALS*
44391>      PEAK FLOW       (cms)=      12.57          3.38        15.008 (iii)
44392>      TIME TO PEAK    (hrs)=       6.00          6.17         6.00
44393>      RUNOFF VOLUME    (mm)=      91.81         56.88        78.19
44394>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
44395>      RUNOFF COEFFICIENT   =       0.98          0.61         0.83
44396>
44397>
44398>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
44399>            CN*  =  78.9    Ia = Dep. Storage  (Above)
44400>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
44401>            THAN THE STORAGE COEFFICIENT.
44402>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44403>
44404> ---------------------------------------------------------------------------------
44405>
44406> --------------------
44407> | ADD HYD  ( 50180)|
44408> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
44409> --------------------          (ha)    (cms)    (hrs)     (mm)
44410>         ID1= 1 ( 40140):    65.76  15.008     6.00    78.19
44411>       + ID2= 2 ( 60130):   108.42   7.613     6.67    52.20
44412>         ==================================================
44413>         ID = 3 ( 50180):   174.18  16.789     6.00    62.01
44414>
44415>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44416> ---------------------------------------------------------------------------------
44417> --------------------
44418> | CALIB            |
44419> | STANDHYD ( 40180)|   Area    (ha)=  13.89
44420> |ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
44421> --------------------
44422>                              IMPERVIOUS    PERVIOUS (i)
44423>      Surface Area     (ha)=      10.55          3.33
44424>      Dep. Storage     (mm)=       2.00          6.90
44425>      Average Slope     (%)=       1.00          1.00
44426>      Length            (m)=     304.26         66.00
44427>      Mannings n           =      0.015         0.310
44428>
44429>      Max.Eff.Inten.(mm/hr)=     123.62         93.83
44430>                    over (min)        5.00         20.00
44431>      Storage Coeff.  (min)=       4.99 (ii)    18.68 (ii)
44432>      Unit Hyd. Tpeak (min)=       5.00         20.00
44433>      Unit Hyd. peak  (cms)=       0.22          0.06
44434>                                                      *TOTALS*
44435>      PEAK FLOW       (cms)=       3.37          0.46         3.696 (iii)
44436>      TIME TO PEAK    (hrs)=       6.00          6.17         6.00
44437>      RUNOFF VOLUME    (mm)=      91.81         53.21        81.38
44438>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
44439>      RUNOFF COEFFICIENT   =       0.98          0.57         0.87
44440>
44441> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
44442>
44443>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
44444>            CN*  =  79.9    Ia = Dep. Storage  (Above)
44445>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
44446>            THAN THE STORAGE COEFFICIENT.
44447>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44448>
44449> ---------------------------------------------------------------------------------
44450> --------------------
44451> | CALIB            |
44452> | STANDHYD ( 40190)|   Area    (ha)=  13.78
44453> |ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
44454> --------------------
44455>                              IMPERVIOUS    PERVIOUS (i)
44456>      Surface Area     (ha)=       5.74          8.05
44457>      Dep. Storage     (mm)=       2.00          8.12
44458>      Average Slope     (%)=       2.40          2.40
44459>      Length            (m)=     303.13        131.00
44460>      Mannings n           =      0.015         0.350
44461>
44462>      Max.Eff.Inten.(mm/hr)=     123.62         64.86
44463>                    over (min)        5.00         25.00
44464>      Storage Coeff.  (min)=       3.83 (ii)    23.64 (ii)
44465>      Unit Hyd. Tpeak (min)=       5.00         25.00
44466>      Unit Hyd. peak  (cms)=       0.25          0.05
44467>                                                      *TOTALS*
44468>      PEAK FLOW       (cms)=       1.81          0.80         2.276 (iii)
44469>      TIME TO PEAK    (hrs)=       6.00          6.25         6.00
44470>      RUNOFF VOLUME    (mm)=      91.81         47.85        64.84
44471>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
44472>      RUNOFF COEFFICIENT   =       0.98          0.51         0.69
44473>
44474> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
44475>
44476>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
44477>            CN*  =  77.8    Ia = Dep. Storage  (Above)
44478>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
44479>            THAN THE STORAGE COEFFICIENT.
44480>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44481>
44482> ---------------------------------------------------------------------------------
44483> --------------------
44484> | ROUTE CHN( 60190)|
44485> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
44486> --------------------
44487>                <------ DATA FOR SECTION (   1.1) ------>
44488>                Distance      Elevation       Manning
44489>                    0.00         155.90        0.0450
44490>                    1.00         154.69        0.0450
44491>                    2.00         154.30        0.0450
44492>                    3.00         154.00    0.0450 /0.0350  Main Channel
44493>                    4.00         153.74        0.0350      Main Channel
44494>                    5.00         153.51        0.0350      Main Channel
44495>                    6.00         153.46        0.0350      Main Channel
44496>                    7.00         153.77        0.0350      Main Channel
44497>                    8.00         154.10    0.0350 /0.0450  Main Channel
44498>                    9.00         154.50        0.0450
44499>                   10.00         154.84        0.0450
44500>                   11.00         155.13        0.0450
44501>                   12.00         155.26        0.0450
44502>                   13.00         155.32        0.0450
44503>                   14.00         155.42        0.0450
44504>                   15.00         155.52        0.0450
44505>                   16.00         155.62        0.0450
44506>                   17.00         155.69        0.0450
44507>                   18.00         155.76        0.0450
44508>                   20.00         155.88        0.0450
44509>
44510>       <--------------------- TRAVEL TIME TABLE ---------------------->
44511>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
44512>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
44513>         0.11  153.57    .445E+02       0.0         0.32      21.18
44514>         0.22  153.68    .135E+03       0.2         0.51      13.45
44515>         0.33  153.79    .262E+03       0.4         0.66      10.46
44516>         0.43  153.89    .423E+03       0.8         0.79       8.73
44517>         0.54  154.00    .616E+03       1.3         0.90       7.61
44518>         0.68  154.14    .900E+03       2.4         1.09       6.30
44519>         0.81  154.27    .123E+04       3.8         1.27       5.40
44520>         0.95  154.41    .160E+04       5.5         1.42       4.83
44521>         1.08  154.54    .201E+04       7.6         1.55       4.43
44522>         1.22  154.68    .246E+04       9.9         1.67       4.12
44523>         1.35  154.81    .294E+04      12.7         1.78       3.86
44524>         1.48  154.94    .345E+04      15.8         1.88       3.65
44525>         1.62  155.08    .400E+04      19.2         1.97       3.48
44526>         1.75  155.21    .458E+04      22.9         2.05       3.34
44527>         1.89  155.35    .524E+04      26.8         2.11       3.26
44528>         2.02  155.48    .599E+04      31.4         2.16       3.18
44529>         2.16  155.62    .682E+04      36.5         2.20       3.12
44530>         2.29  155.75    .774E+04      41.9         2.23       3.08
44531>         2.43  155.89    .878E+04      48.0         2.25       3.05
44532>
44533>                                    <---- hydrograph ---->   <-pipe / channel->
44534>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
44535>                                (ha)    (cms)    (hrs)   (mm)     (m)       (m/s)
44536>    INFLOW : ID= 2 ( 40190)   13.78     2.28     6.00  64.84      0.66      1.07
44537>    OUTFLOW: ID= 1 ( 60190)   13.78     1.96     6.00  64.83      0.62      1.00
44538>
44539>
44540>
44541> ---------------------------------------------------------------------------------
44542> --------------------
44543> | CALIB            |
44544> | STANDHYD ( 40200)|   Area    (ha)=  22.94
44545> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
44546> --------------------
44547>                              IMPERVIOUS    PERVIOUS (i)
44548>      Surface Area     (ha)=      17.41          5.53
44549>      Dep. Storage     (mm)=       2.00          6.75
44550>      Average Slope     (%)=       3.00          3.00
44551>      Length            (m)=     391.08        150.00
44552>      Mannings n           =      0.015         0.290
44553>
44554>      Max.Eff.Inten.(mm/hr)=     123.62         68.45
44555>                    over (min)        5.00         25.00
44556>      Storage Coeff.  (min)=       4.17 (ii)    21.74 (ii)
44557>      Unit Hyd. Tpeak (min)=       5.00         25.00
44558>      Unit Hyd. peak  (cms)=       0.24          0.05
44559>                                                      *TOTALS*
44560>      PEAK FLOW       (cms)=       5.79          0.61         6.149 (iii)
44561>      TIME TO PEAK    (hrs)=       6.00          6.25         6.00
44562>      RUNOFF VOLUME    (mm)=      91.81         50.77        81.44
44563>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
44564>      RUNOFF COEFFICIENT   =       0.98          0.54         0.87
44565>
44566> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
44567>
44568>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
44569>            CN*  =  79.4    Ia = Dep. Storage  (Above)
44570>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
44571>            THAN THE STORAGE COEFFICIENT.
44572>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44573>
44574> ---------------------------------------------------------------------------------
44575>
44576> --------------------
44577> | ADD HYD  ( 50200)|
44578> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
44579> --------------------          (ha)    (cms)    (hrs)     (mm)
44580>         ID1= 1 ( 40180):    13.89   3.696     6.00    81.38
44581>       + ID2= 2 ( 40200):    22.94   6.149     6.00    81.44
44582>         ==================================================
44583>         ID = 3 ( 50200):    36.83   9.846     6.00    81.42
44584>
44585>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44586> ---------------------------------------------------------------------------------
44587>
44588> --------------------
44589> | ADD HYD  ( 50200)|
44590> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
44591> --------------------          (ha)    (cms)    (hrs)     (mm)
44592>         ID1= 3 ( 50200):    36.83   9.846     6.00    81.42
44593>       + ID2= 2 ( 60190):    13.78   1.963     6.00    64.83
44594>         ==================================================
44595>         ID = 1 ( 50200):    50.61  11.808     6.00    76.90
44596>
44597>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44598> ---------------------------------------------------------------------------------
44599> --------------------
44600> | CALIB            |
44601> | STANDHYD ( 40210)|   Area    (ha)=   6.07
44602> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
44603> --------------------
44604>                              IMPERVIOUS    PERVIOUS (i)
44605>      Surface Area     (ha)=       5.01          1.06
44606>      Dep. Storage     (mm)=       2.00          6.27
44607>      Average Slope     (%)=       0.90          0.90
44608>      Length            (m)=     201.21        118.00
44609>      Mannings n           =      0.015         0.290
44610>
44611>      Max.Eff.Inten.(mm/hr)=     123.62         58.32
44612>                    over (min)        5.00         30.00
44613>      Storage Coeff.  (min)=       4.02 (ii)    27.29 (ii)
44614>      Unit Hyd. Tpeak (min)=       5.00         30.00
44615>      Unit Hyd. peak  (cms)=       0.24          0.04
44616>                                                      *TOTALS*
44617>      PEAK FLOW       (cms)=       1.68          0.10         1.730 (iii)
44618>      TIME TO PEAK    (hrs)=       6.00          6.33         6.00
44619>      RUNOFF VOLUME    (mm)=      91.81         50.52        84.28
44620>      TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
44621>      RUNOFF COEFFICIENT   =       0.98          0.54         0.90
44622>
44623> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
44624>
44625>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
44626>            CN*  =  79.0    Ia = Dep. Storage  (Above)
44627>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
44628>            THAN THE STORAGE COEFFICIENT.
44629>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
44630>
44631> ---------------------------------------------------------------------------------
44632>
44633> --------------------
44634> | ADD HYD  ( 50210)|
44635> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
44636> --------------------          (ha)    (cms)    (hrs)     (mm)
44637>         ID1= 1 ( 40210):     6.07   1.730     6.00    84.28
44638>       + ID2= 2 ( 50200):    50.61  11.808     6.00    76.90
44639>         ==================================================
44640>         ID = 3 ( 50210):    56.68  13.539     6.00    77.69
44641>
44642>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
44643> ---------------------------------------------------------------------------------
44644> --------------------
44645> | ROUTE CHN( 60210)|
44646> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
44647> --------------------
44648>                <------ DATA FOR SECTION (   1.1) ------>
44649>                Distance      Elevation       Manning
44650>                    0.00         152.62        0.0450
44651>                    7.00         152.39        0.0450
44652>                    8.00         152.02        0.0450
44653>                    9.00         151.48        0.0450
44654>                   10.00         151.01        0.0450
44655>                   11.00         150.56    0.0450 /0.0350  Main Channel
44656>                   12.00         150.38        0.0350      Main Channel
44657>                   13.00         150.40        0.0350      Main Channel
44658>                   14.00         150.36        0.0350      Main Channel
44659>                   15.00         150.60    0.0350 /0.0450  Main Channel
44660>                   16.00         150.99        0.0450
44661>                   17.00         151.50        0.0450
44662>                   18.00         151.91        0.0450
44663>                   19.00         152.65        0.0450
44664>
44665>       <--------------------- TRAVEL TIME TABLE ---------------------->
44666>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
44667>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
44668>         0.10  150.46    .580E+02       0.1         0.30      17.06
44669>         0.20  150.56    .160E+03       0.3         0.48      10.57
44670>         0.32  150.68    .314E+03       0.7         0.70       7.18
44671>         0.44  150.80    .489E+03       1.4         0.89       5.71
44672>         0.56  150.92    .686E+03       2.3         1.03       4.89
44673>         0.69  151.04    .904E+03       3.5         1.16       4.35
44674>         0.81  151.16    .114E+04       4.8         1.28       3.95
44675>         0.93  151.29    .140E+04       6.4         1.38       3.66
44676>         1.05  151.41    .167E+04       8.1         1.48       3.42
```

```
        1.17   151.53    .196E+04      10.1          1.57       3.22
        1.29   151.65    .227E+04      12.3          1.65       3.06
        1.41   151.77    .260E+04      14.8          1.73       2.93
        1.54   151.89    .295E+04      17.5          1.80       2.81
        1.66   152.01    .331E+04      20.4          1.87       2.70
        1.78   152.13    .369E+04      23.6          1.94       2.61
        1.90   152.26    .409E+04      27.0          2.00       2.52
        2.02   152.38    .451E+04      30.7          2.06       2.45
        2.14   152.50    .500E+04      33.4          2.03       2.49
        2.26   152.62    .563E+04      37.3          2.01       2.51

                                          <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
    INFLOW : ID= 2 ( 50210)    56.68    13.54    6.00  77.69      1.35      1.69
    OUTFLOW: ID= 1 ( 60210)    56.68    13.00    6.00  77.69      1.33      1.67



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.91         2.40
     Dep. Storage     (mm)=       2.00         6.17
     Average Slope     (%)=       0.60         0.60
     Length            (m)=     274.66        79.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     123.62        69.10
                 over (min)        5.00        25.00
     Storage Coeff.  (min)=       5.47 (ii)   24.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.20         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.89         0.25          3.044 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.25           6.00
     RUNOFF VOLUME    (mm)=      91.81        51.38          82.81
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.55           0.88

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40220):    11.32   3.044     6.00    82.81
     + ID2= 2 ( 60210):    56.68  13.002     6.00    77.69
       ================================================
       ID = 3 ( 50120):    68.00  16.045     6.00    78.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50120):    68.00  16.045     6.00    78.54
     + ID2= 2 ( 50180):   174.18  16.789     6.00    62.01
       ================================================
       ID = 3 ( 50140):   242.18  32.834     6.00    66.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         152.29        0.0450
                   2.00         152.20        0.0450
                   4.00         152.17        0.0450
                   6.00         152.15        0.0450
                   8.00         151.78        0.0450
                  10.00         151.28        0.0450
                  12.00         150.79        0.0450
                  14.00         150.20    0.0450 /0.0350  Main Channel
                  16.00         149.82        0.0350      Main Channel
                  18.00         149.51        0.0350      Main Channel
                  20.00         149.24        0.0350      Main Channel
                  22.00         149.48        0.0350      Main Channel
                  24.00         150.00    0.0350 /0.0450  Main Channel
                  26.00         150.52        0.0450
                  28.00         151.14        0.0450
                  30.00         151.68        0.0450
                  32.00         152.11        0.0450
                  34.00         152.20        0.0450
                  35.00         152.27        0.0450
                  38.00         152.30        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   149.39    .694E+02       0.1          0.32      19.63
        0.31   149.54    .273E+03       0.4          0.53      11.92
        0.46   149.70    .577E+03       1.1          0.72       8.87
        0.61   149.85    .972E+03       2.2          0.87       7.30
        0.76   150.00    .145E+04       3.9          1.01       6.26
        0.93   150.16    .205E+04       6.4          1.18       5.36
        1.09   150.33    .274E+04       9.9          1.37       4.62
        1.25   150.49    .350E+04      14.2          1.54       4.11
        1.42   150.65    .434E+04      19.3          1.69       3.75
        1.58   150.82    .524E+04      25.2          1.83       3.47
        1.74   150.98    .621E+04      31.8          1.95       3.26
        1.91   151.14    .726E+04      39.2          2.06       3.09
        2.07   151.31    .839E+04      47.5          2.16       2.94
        2.23   151.47    .959E+04      56.6          2.25       2.82
        2.40   151.63    .109E+05      66.7          2.34       2.72
        2.56   151.80    .122E+05      77.6          2.41       2.63
        2.72   151.96    .137E+05      89.3          2.48       2.55
        2.89   152.12    .153E+05     102.0          2.55       2.49
        3.05   152.29    .172E+05     111.6          2.47       2.57

                                          <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
    INFLOW : ID= 2 ( 50140)    242.18   32.83    6.00  66.65      1.77      1.96
    OUTFLOW: ID= 1 ( 60140)    242.18   30.80    6.00  66.65      1.72      1.93



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--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         151.02        0.0450
                   2.00         150.89        0.0450
                   4.00         150.73        0.0450
                   6.00         150.65        0.0450
                   8.00         150.38        0.0450
                  10.00         149.93        0.0450
                  12.00         149.51        0.0450
                  14.00         149.02    0.0450 /0.0350  Main Channel
                  16.00         148.64        0.0350      Main Channel
                  18.00         148.27        0.0350      Main Channel
                  20.00         148.39        0.0350      Main Channel
                  22.00         148.60        0.0350      Main Channel
                  24.00         148.94    0.0350 /0.0450  Main Channel
                  26.00         149.34        0.0450
                  28.00         149.66        0.0450
                  30.00         150.12        0.0450
                  32.00         150.45        0.0450
                  34.00         150.52        0.0450
                  36.00         150.60        0.0450
                  38.00         150.60        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11   148.38    .283E+02       0.0          0.26      13.34
        0.22   148.49    .107E+03       0.2          0.44       7.98
        0.34   148.60    .226E+03       0.6          0.58       6.07
        0.45   148.72    .380E+03       1.3          0.72       4.90
        0.56   148.83    .563E+03       2.2          0.84       4.20
        0.67   148.94    .775E+03       3.5          0.95       3.72
        0.80   149.07    .105E+04       5.5          1.11       3.17
        0.93   149.20    .136E+04       8.2          1.27       2.77
        1.06   149.32    .170E+04      11.3          1.41       2.50
        1.18   149.45    .207E+04      14.9          1.52       2.31
        1.31   149.58    .248E+04      19.1          1.63       2.17
        1.44   149.71    .292E+04      23.8          1.72       2.05
        1.57   149.83    .340E+04      29.1          1.81       1.95
        1.70   149.96    .391E+04      34.9          1.89       1.87
        1.82   150.09    .445E+04      41.4          1.97       1.79
        1.95   150.22    .502E+04      48.4          2.04       1.73
        2.08   150.35    .563E+04      56.0          2.10       1.67
        2.21   150.47    .628E+04      63.9          2.15       1.64
        2.33   150.60    .702E+04      71.1          2.14       1.64

                                          <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
    INFLOW : ID= 2 ( 60140)    242.18   30.80    6.00  66.65      1.61      1.83
    OUTFLOW: ID= 1 ( 60150)    242.18   29.68    6.08  66.65      1.58      1.81



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40150)|   Area    (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.11         2.26
     Dep. Storage     (mm)=       2.00         6.34
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     189.18        45.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     123.62       100.57
                 over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.92 (ii)   10.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.96         0.42          1.332 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81        53.97          73.69
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.58           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40150):     5.37    1.332     6.00    73.69
     + ID2= 2 ( 60150):   242.18   29.684     6.08    66.65
       ================================================
       ID = 3 ( 50160):   247.54   30.611     6.00    66.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40240)|   Area    (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.79         1.50
     Dep. Storage     (mm)=       2.00         5.70
     Average Slope     (%)=       3.40         3.40
     Length            (m)=     261.85        70.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     123.62        88.21
                 over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.16 (ii)    7.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.27         0.14
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.98         0.30          3.278 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        51.66          85.74
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.55           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40250)|   Area    (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.61         4.75
     Dep. Storage     (mm)=       2.00         7.14
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     298.43        70.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=     123.62        81.02
                 over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.00 (ii)   16.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       2.84         0.60          3.264 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17           6.00
     RUNOFF VOLUME    (mm)=      91.81        49.47          76.10
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.53           0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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```
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         155.56        0.0450
                   2.00         155.23        0.0450
                   4.00         154.58        0.0450
                   6.00         153.92        0.0450
                   8.00         153.53        0.0450
                  10.00         152.64        0.0450
                  12.00         152.43    0.0450 /0.0350  Main Channel
                  14.00         152.24        0.0350      Main Channel
                  16.00         152.07        0.0350      Main Channel
                  18.00         152.30    0.0350 /0.0450  Main Channel
                  20.00         152.46        0.0450
                  22.00         155.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  152.18    .895E+02        0.1         0.43      24.33
        0.24  152.30    .356E+03        0.4         0.69      15.20
        0.43  152.49    .118E+04        2.1         1.10       9.55
        0.62  152.68    .234E+04        5.5         1.48       7.09
        0.81  152.88    .361E+04       10.4         1.83       5.76
        1.00  153.07    .494E+04       16.7         2.13       4.94
        1.19  153.26    .634E+04       24.2         2.40       4.38
        1.38  153.45    .781E+04       32.8         2.65       3.97
        1.58  153.64    .936E+04       42.5         2.86       3.67
        1.77  153.83    .110E+05       53.3         3.05       3.45
        1.96  154.02    .128E+05       65.6         3.23       3.26
        2.15  154.21    .147E+05       79.4         3.40       3.09
        2.34  154.40    .167E+05       94.5         3.57       2.95
        2.53  154.60    .188E+05      111.0         3.73       2.82
        2.72  154.79    .209E+05      128.7         3.89       2.71
        2.91  154.98    .231E+05      147.8         4.03       2.61
        3.10  155.17    .255E+05      168.3         4.17       2.52
        3.30  155.36    .279E+05      189.2         4.28       2.46
        3.49  155.55    .305E+05      211.3         4.38       2.40

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     3.26    6.00  76.10      0.49      1.21
   OUTFLOW: ID= 1 ( 60240)   13.36     2.68    6.00  76.09      0.46      1.15

--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40240):    10.28    3.278     6.00    85.74
     + ID2= 2 ( 50160):   247.54   30.611     6.00    66.81
       ====================================================
       ID = 3 ( 50250):   257.83   33.889     6.00    67.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50250):   257.83   33.889     6.00    67.56
     + ID2= 2 ( 60240):    13.36    2.683     6.00    76.09
       ====================================================
       ID = 1 ( 50250):   271.19   36.573     6.00    67.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         149.47        0.0450
                   3.00         149.39        0.0450
                   6.00         149.18        0.0450
                   9.00         148.85        0.0450
                  12.00         148.60        0.0450
                  15.00         148.16        0.0450
                  18.00         147.81        0.0450
                  21.00         147.50        0.0450
                  24.00         147.26        0.0350      Main Channel
                  27.00         146.88        0.0350      Main Channel
                  30.00         146.72        0.0350      Main Channel
                  33.00         147.27    0.0350 /0.0450  Main Channel
                  36.00         147.60        0.0450
                  39.00         147.71        0.0450
                  42.00         148.10        0.0450
                  45.00         148.90        0.0450
                  48.00         149.05        0.0450
                  51.00         149.12        0.0450
                  54.00         149.43        0.0450
                  57.00         149.67        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.14  146.85    .156E+03        0.1         0.30      40.24
        0.27  146.99    .583E+03        0.4         0.51      23.51
        0.41  147.13    .119E+04        1.1         0.68      17.78
        0.54  147.26    .198E+04        2.2         0.82      14.76
        0.69  147.41    .309E+04        4.3         1.02      11.88
        0.84  147.56    .455E+04        7.2         1.15      10.50
        0.98  147.70    .637E+04       10.9         1.24       9.73
        1.13  147.85    .862E+04       15.8         1.32       9.12
        1.28  148.00    .111E+05       21.7         1.41       8.55
        1.42  148.14    .139E+05       28.7         1.50       8.06
        1.57  148.29    .169E+05       37.1         1.59       7.58
        1.72  148.44    .200E+05       46.5         1.68       7.16
        1.87  148.58    .233E+05       57.0         1.77       6.80
        2.01  148.73    .268E+05       68.3         1.85       6.53
        2.16  148.88    .305E+05       80.9         1.92       6.28
        2.31  149.02    .345E+05       93.2         1.95       6.17
        2.45  149.17    .391E+05      106.6         1.97       6.11
        2.60  149.32    .441E+05      123.2         2.02       5.97
        2.75  149.47    .495E+05      139.7         2.04       5.91

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50250)  271.19    36.57    6.00  67.98      1.56      1.59
   OUTFLOW: ID= 1 ( 60250)  271.19    30.89    6.08  67.98      1.46      1.52

--------------------
| CALIB            |
| STANDHYD ( 40260)|   Area    (ha)=  28.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.93         12.52
     Dep. Storage     (mm)=       2.00          6.70
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     435.49         46.00
     Mannings n           =      0.015         0.300

     Max.Eff.Inten.(mm/hr)=     123.62        117.38
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       5.71 (ii)    14.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.20          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.00          2.40          6.100 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      91.81         55.47         71.09
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.59          0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40260):    28.45    6.100     6.00    71.09
     + ID2= 2 ( 60250):   271.19   30.894     6.08    67.98
       ====================================================
       ID = 3 ( 50260):   299.64   35.301     6.08    68.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| ROUTE CHN( 60260)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         143.17        0.0450
                   4.00         143.15        0.0450
                   8.00         143.14        0.0450
                  12.00         142.95        0.0450
                  16.00         142.87        0.0450
                  20.00         142.67        0.0450
                  24.00         142.24        0.0450
                  28.00         141.84        0.0450
                  32.00         141.61        0.0450
                  36.00         141.32        0.0450
                  40.00         140.98        0.0450
                  44.00         140.88        0.0450
                  48.00         139.95        0.0350      Main Channel
                  52.00         140.09        0.0350      Main Channel
                  56.00         141.11        0.0450
                  60.00         141.43        0.0450
                  76.00         143.21        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.17  140.12    .479E+03        0.2         0.48      36.89
        0.34  140.29    .147E+04        1.2         0.86      20.63
        0.51  140.46    .272E+04        2.9         1.12      15.78
        0.68  140.63    .421E+04        5.3         1.33      13.28
        0.85  140.80    .596E+04        8.5         1.51      11.69
        1.02  140.97    .812E+04       12.0         1.56      11.29
        1.19  141.14    .111E+05       17.6         1.68      10.52
        1.36  141.31    .147E+05       25.4         1.83       9.67
        1.53  141.48    .191E+05       34.9         1.93       9.14
        1.70  141.65    .242E+05       46.4         2.03       8.71
        1.87  141.81    .301E+05       59.9         2.11       8.38
        2.04  141.98    .367E+05       76.6         2.21       7.99
        2.21  142.15    .439E+05       95.9         2.31       7.63
        2.37  142.32    .517E+05      117.9         2.42       7.30
        2.54  142.49    .600E+05      142.7         2.52       7.01
        2.71  142.66    .689E+05      170.3         2.62       6.74
        2.88  142.83    .785E+05      198.2         2.68       6.60
        3.05  143.00    .892E+05      225.9         2.68       6.58
        3.22  143.17    .101E+06      250.7         2.63       6.73

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50260)  299.64    35.30    6.08  68.28      1.53      1.94
   OUTFLOW: ID= 1 ( 60260)  299.64    30.34    6.25  68.27      1.44      1.88

--------------------
| CALIB            |
| STANDHYD ( 40270)|   Area    (ha)=   9.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.12          6.71
     Dep. Storage     (mm)=       2.00          8.03
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     256.01         73.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     123.62         96.96
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       4.37 (ii)    18.86 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.23          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.73          0.95          1.403 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81         53.77         62.14
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.57          0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50270)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40270):     9.83    1.403     6.00    62.14
     + ID2= 2 ( 60260):   299.64   30.340     6.25    68.27
       ====================================================
       ID = 3 ( 50270):   309.47   31.382     6.25    68.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------
| CALIB            |
| STANDHYD ( 40280)|   Area    (ha)=  31.30
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.16         11.14
     Dep. Storage     (mm)=       2.00          7.27
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     456.83         53.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     123.62        114.29
                   over (min)        5.00         20.00
     Storage Coeff.  (min)=       6.18 (ii)    16.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.19          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       5.23          1.96          6.636 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81         53.95         73.51
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.58          0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
```

```
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40280):    31.30   6.636     6.00    73.51
      + ID2= 2 ( 50270):   309.47  31.382     6.25    68.08
        ================================================
        ID = 3 ( 50280):   340.77  34.869     6.17    68.58

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        139.35        0.0450
                   3.00        139.19        0.0450
                   6.00        138.46        0.0450
                  27.00        137.71        0.0450
                  30.00        137.44        0.0350      Main Channel
                  33.00        137.26        0.0350      Main Channel
                  36.00        137.51        0.0350      Main Channel
                  39.00        137.64    0.0350 /0.0450  Main Channel
                  42.00        137.71        0.0450
                  57.00        139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  137.35    .361E+02       0.0         0.30       17.09
        0.18  137.44    .145E+03       0.2         0.48       10.76
        0.30  137.55    .369E+03       0.8         0.68        7.57
        0.41  137.67    .717E+03       1.9         0.82        6.28
        0.52  137.78    .124E+04       3.9         0.97        5.27
        0.63  137.89    .192E+04       6.8         1.10        4.67
        0.74  138.00    .273E+04      10.7         1.20        4.25
        0.86  138.11    .369E+04      15.7         1.30        3.93
        0.97  138.23    .480E+04      21.8         1.39        3.67
        1.08  138.34    .605E+04      29.1         1.48        3.46
        1.19  138.45    .745E+04      37.8         1.56        3.28
        1.31  138.56    .895E+04      48.6         1.67        3.07
        1.42  138.68    .105E+05      60.8         1.78        2.88
        1.53  138.79    .121E+05      74.4         1.89        2.71
        1.64  138.90    .138E+05      89.3         1.99        2.57
        1.76  139.01    .155E+05     105.5         2.10        2.44
        1.87  139.13    .172E+05     123.0         2.19        2.33
        1.98  139.24    .190E+05     140.8         2.27        2.25
        2.09  139.35    .209E+05     159.0         2.33        2.20

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  340.77    34.87     6.17   68.58      1.16      1.53
   OUTFLOW: ID= 1 ( 60280)  340.77    34.58     6.25   68.58      1.15      1.53


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area     (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.71         4.81
     Dep. Storage     (mm)=       2.00         7.99
     Average Slope     (%)=       1.60         1.60
     Length            (m)=     277.19        63.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=     123.62       107.83
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.09 (ii)   15.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.75         0.82       2.341 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.17        6.00
     RUNOFF VOLUME    (mm)=      91.81        52.23       70.02
     TOTAL RAINFALL   (mm)=      93.81        93.81       93.81
     RUNOFF COEFFICIENT   =       0.98         0.56        0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40300):    11.53   2.341     6.00    70.02
      + ID2= 2 ( 60280):   340.77  34.578     6.25    68.58
        ================================================
        ID = 3 ( 50300):   352.30  35.639     6.25    68.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        137.26        0.0450
                   4.00        136.94        0.0450
                   8.00        136.82        0.0450
                  12.00        136.69        0.0450
                  16.00        136.55        0.0450
                  36.00        135.52        0.0350      Main Channel
                  64.00        136.21        0.0450
                  75.00        136.49        0.0450
                  84.00        137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  135.61    .491E+02       0.1         0.26       12.99
        0.18  135.70    .196E+03       0.4         0.42        8.18
        0.27  135.79    .442E+03       1.2         0.55        6.24
        0.36  135.88    .785E+03       2.5         0.66        5.15
        0.45  135.97    .123E+04       4.6         0.77        4.44
        0.53  136.06    .177E+04       7.5         0.87        3.93
        0.62  136.15    .240E+04      11.3         0.96        3.55
        0.71  136.24    .314E+04      16.4         1.07        3.19
        0.80  136.32    .397E+04      23.3         1.20        2.84
        0.89  136.41    .490E+04      31.4         1.32        2.60
        0.98  136.50    .592E+04      40.8         1.42        2.41
        1.07  136.59    .701E+04      51.5         1.51        2.27
        1.16  136.68    .816E+04      63.4         1.59        2.14
        1.25  136.77    .938E+04      76.6         1.67        2.04
        1.34  136.86    .107E+05      91.2         1.75        1.95
        1.42  136.95    .120E+05     107.3         1.83        1.87
        1.51  137.04    .135E+05     125.8         1.91        1.78
        1.60  137.13    .149E+05     145.6         2.00        1.71
        1.69  137.22    .164E+05     166.8         2.08        1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  352.30    35.64     6.25   68.63      0.93      1.36
   OUTFLOW: ID= 1 ( 60300)  352.30    35.39     6.25   68.63      0.93      1.36


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area     (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77         6.39
     Dep. Storage     (mm)=       2.00         8.38
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     247.21        43.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     123.62        93.85
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.11 (ii)   11.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.27         0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.74         1.09       1.698 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08        6.00
     RUNOFF VOLUME    (mm)=      91.81        51.25       60.79
     TOTAL RAINFALL   (mm)=      93.81        93.81       93.81
     RUNOFF COEFFICIENT   =       0.98         0.55        0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17   1.698     6.00    60.79
      + ID2= 2 ( 60300):   352.30  35.390     6.25    68.63
        ================================================
        ID = 3 ( 50340):   361.46  36.231     6.25    68.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   346.28  18.548     6.17    68.31
      + ID2= 2 ( 50340):   361.46  36.231     6.25    68.43
        ================================================
        ID = 3 ( 50350):   707.75  54.411     6.25    68.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        134.05        0.0450
                  24.00        133.67        0.0450
                  30.00        131.85        0.0450
                  36.00        131.42        0.0450
                  42.00        130.48        0.0450
                  48.00        130.42        0.0350      Main Channel
                  54.00        130.42        0.0350      Main Channel
                  60.00        130.62        0.0450
                  66.00        130.77        0.0450
                  72.00        131.03        0.0450
                  78.00        131.43        0.0450
                  84.00        131.38        0.0450
                  90.00        131.33        0.0450
                  96.00        131.98        0.0450
                 102.00        133.31        0.0450
                 120.00        133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00  130.42    .133E+02       0.0         0.03      768.63
        0.19  130.61    .383E+04       1.6         0.61       40.07
        0.37  130.79    .994E+04       6.6         0.97       25.18
        0.56  130.98    .179E+05      15.1         1.23       19.81
        0.75  131.16    .272E+05      27.2         1.46       16.72
        0.93  131.35    .377E+05      42.2         1.64       14.88
        1.12  131.54    .521E+05      60.9         1.71       14.26
        1.30  131.72    .683E+05      87.2         1.86       13.07
        1.49  131.91    .857E+05     119.1         2.03       11.99
        1.68  132.09    .104E+06     157.8         2.22       10.96
        1.86  132.28    .122E+06     201.6         2.41       10.11
        2.05  132.47    .141E+06     250.1         2.59        9.41
        2.23  132.65    .160E+06     303.1         2.76        8.82
        2.42  132.84    .180E+06     360.6         2.93        8.32
        2.61  133.02    .200E+06     422.5         3.08        7.90
        2.79  133.21    .221E+06     488.7         3.24        7.53
        2.98  133.40    .242E+06     552.2         3.34        7.29
        3.16  133.58    .264E+06     613.6         3.40        7.17
        3.35  133.77    .288E+06     658.8         3.34        7.30

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50350)  707.75    54.41     6.25   68.37      1.05      1.68
   OUTFLOW: ID= 1 ( 60350)  707.75    47.11     6.42   68.36      0.98      1.66


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.324 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.446
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.80   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.135 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.402
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
```

```
| STANDHYD (******)|   Area    (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n             =    0.013        0.025

     Max.Eff.Inten.(mm/hr)=     123.62       274.94
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.14 (ii)    2.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.30
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.20         0.34          0.536 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81        77.40         82.59
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.83          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       0.15     0.00     0.00     0.00     0.00     0.15
       0.15     1.00     0.00     0.00     0.00     1.15
       0.15   100.00     0.00     0.00     0.00   100.15

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    1.62      0.54      6.00   82.59
     ================================================
     ID= 2  (   2)    :    1.20      0.15      6.00   82.59
     ID= 3  (   2)    :    0.42      0.38      6.00   82.59
     ID= 4  (   2)    :    0.00      0.00      0.00    0.00
     ID= 5  (   2)    :    0.00      0.00      0.00    0.00
     ID= 6  (   2)    :    0.00      0.00      0.00    0.00

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80   0.135     6.08    59.40
      + ID2= 2 (******):     1.20   0.154     6.00    82.59
        ================================================
        ID = 3 (******):     2.00   0.278     6.00    73.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22   0.324     6.08    59.45
      + ID2= 2 (******):     2.00   0.278     6.00    73.29
        ================================================
        ID = 3 (******):     4.22   0.570     6.08    66.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
      (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
       0.00     0.00     0.00     0.00     0.00     0.00
       1.00     1.00     0.00     0.00     0.00     2.00
       2.00     2.00     0.00     0.00     0.00     4.00
      10.00    10.00     0.00     0.00     0.00    20.00

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    4.22      0.57      6.08   66.00
     ================================================
     ID= 2  (   2)    :    2.11      0.28      6.08   66.00
     ID= 3  (   2)    :    2.11      0.28      6.08   66.00
     ID= 4  (   2)    :    0.00      0.00      0.00    0.00
     ID= 5  (   2)    :    0.00      0.00      0.00    0.00
     ID= 6  (   2)    :    0.00      0.00      0.00    0.00

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.03   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.165 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.425
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03   0.165     6.08    59.42
      + ID2= 2 (******):     2.11   0.285     6.08    66.00
        ================================================
        ID = 3 (******):     3.14   0.449     6.08    63.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.61   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.112 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.310
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.632

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61   0.112     6.00    59.31
      + ID2= 2 (******):     2.11   0.285     6.08    66.00
        ================================================
        ID = 3 (******):     2.72   0.396     6.08    64.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.54   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.095 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.367
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.034
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.629

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.056     6.00    59.03
      + ID2= 2 (******):     0.54   0.095     6.08    59.37
        ================================================
        ID = 3 (******):     0.80   0.147     6.00    59.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.80   0.147     6.00    59.26
      + ID2= 2 (******):     2.72   0.396     6.08    64.50
        ================================================
        ID = 1 (******):     3.52   0.540     6.08    63.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.325 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.440
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.170 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.402
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.29   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.17

     Unit Hyd Qpeak  (cms)=   0.065

     PEAK FLOW       (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.267
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.632

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         0.65
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n             =    0.013        0.025

     Max.Eff.Inten.(mm/hr)=     123.62       390.31
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.14 (ii)    2.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.31
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.51         0.71          1.222 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81        81.45         85.69
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.87          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships
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```
45901>
45902>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
45903>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
45904>        0.00     0.00     0.00     0.00     0.00     0.00
45905>        0.37     0.00     0.00     0.00     0.00     0.37
45906>        0.37     1.00     0.00     0.00     0.00     1.37
45907>        0.37   100.00     0.00     0.00     0.00   100.37
45908>
45909>                                AREA     QPEAK     TPEAK     R.V.
45910>                                (ha)     (cms)     (hrs)     (mm)
45911>      TOTAL HYD.(ID= 1):    3.63      1.22      6.00    85.69
45912>      ================================================
45913>      ID= 2  (   2)    :   2.72      0.37      6.00    85.69
45914>      ID= 3  (   2)    :   0.91      0.85      6.00    85.69
45915>      ID= 4  (   2)    :   0.00      0.00      0.00     0.00
45916>      ID= 5  (   2)    :   0.00      0.00      0.00     0.00
45917>      ID= 6  (   2)    :   0.00      0.00      0.00     0.00
45918> ------------------------------------------------------------------------------
45919>
45920> --------------------
45921> | ADD HYD  (******)|
45922> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
45923> --------------------          (ha)    (cms)    (hrs)     (mm)
45924>         ID1= 1 (******):     0.29   0.056     6.00    59.27
45925>       + ID2= 2 (******):     2.72   0.373     6.00    85.69
45926>         ================================================
45927>         ID = 3 (******):     3.01   0.429     6.00    83.15
45928>
45929>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45930> ------------------------------------------------------------------------------
45931>
45932> --------------------
45933> | ADD HYD  (******)|
45934> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
45935> --------------------          (ha)    (cms)    (hrs)     (mm)
45936>         ID1= 1 (******):     1.01   0.170     6.08    59.40
45937>       + ID2= 2 (******):     3.01   0.429     6.00    83.15
45938>         ================================================
45939>         ID = 3 (******):     4.02   0.585     6.00    77.18
45940>
45941>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45942> ------------------------------------------------------------------------------
45943>
45944> --------------------
45945> | ADD HYD  (******)|
45946> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
45947> --------------------          (ha)    (cms)    (hrs)     (mm)
45948>         ID1= 1 (******):     2.16   0.325     6.08    59.44
45949>       + ID2= 2 (******):     4.02   0.585     6.00    77.18
45950>         ================================================
45951>         ID = 3 (******):     6.18   0.865     6.00    70.97
45952>
45953>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
45954> ------------------------------------------------------------------------------
45955> --------------------
45956> | CALIB            |
45957> | NASHYD   (******)|   Area     (ha)=   1.92   Curve Number    (CN)= 85.0
45958> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
45959> --------------------   U.H. Tp(hrs)=   0.23
45960>
45961>      Unit Hyd Qpeak  (cms)=   0.319
45962>
45963>      PEAK FLOW       (cms)=   0.315 (i)
45964>      TIME TO PEAK    (hrs)=   6.083
45965>      RUNOFF VOLUME    (mm)=  59.415
45966>      TOTAL RAINFALL   (mm)=  93.808
45967>      RUNOFF COEFFICIENT   =   0.633
45968>
45969>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
45970>
45971> ------------------------------------------------------------------------------
45972> --------------------
45973> | CALIB            |
45974> | NASHYD   (******)|   Area     (ha)=   0.71   Curve Number    (CN)= 85.0
45975> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
45976> --------------------   U.H. Tp(hrs)=   0.20
45977>
45978>      Unit Hyd Qpeak  (cms)=   0.136
45979>
45980>      PEAK FLOW       (cms)=   0.125 (i)
45981>      TIME TO PEAK    (hrs)=   6.083
45982>      RUNOFF VOLUME    (mm)=  59.367
45983>      TOTAL RAINFALL   (mm)=  93.808
45984>      RUNOFF COEFFICIENT   =   0.633
45985>
45986>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
45987>
45988> ------------------------------------------------------------------------------
45989> --------------------
45990> | CALIB            |
45991> | STANDHYD (******)|   Area     (ha)=   8.29
45992> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
45993> --------------------
45994>                              IMPERVIOUS    PERVIOUS (i)
45995>      Surface Area     (ha)=       8.21         0.08
45996>      Dep. Storage     (mm)=       2.00         4.13
45997>      Average Slope     (%)=       1.00         2.00
45998>      Length            (m)=      30.00        30.00
45999>      Mannings n            =      0.013        0.025
46000>
46001>      Max.Eff.Inten.(mm/hr)=     123.62        98.59
46002>                 over (min)        5.00         5.00
46003>      Storage Coeff.  (min)=       1.14 (ii)    1.36 (ii)
46004>      Unit Hyd. Tpeak (min)=       5.00         5.00
46005>      Unit Hyd. peak  (cms)=       0.34         0.33
46006>                                                      *TOTALS*
46007>      PEAK FLOW       (cms)=       2.82         0.02          2.842 (iii)
46008>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
46009>      RUNOFF VOLUME    (mm)=      91.81        61.38          91.50
46010>      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
46011>      RUNOFF COEFFICIENT   =       0.98         0.65           0.98
46012>
46013> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
46014>
46015>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
46016>            CN*  =  86.0    Ia = Dep. Storage  (Above)
46017>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
46018>            THAN THE STORAGE COEFFICIENT.
46019>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
46020>
46021> ------------------------------------------------------------------------------
46022> --------------------
46023> | CALIB            |
46024> | STANDHYD (******)|   Area     (ha)=   1.19
46025> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
46026> --------------------
46027>                              IMPERVIOUS    PERVIOUS (i)
46028>      Surface Area     (ha)=       1.18         0.01
46029>      Dep. Storage     (mm)=       2.00         4.13
46030>      Average Slope     (%)=       1.00         2.00
46031>      Length            (m)=      30.00        30.00
46032>      Mannings n            =      0.013        0.025
46033>
46034>      Max.Eff.Inten.(mm/hr)=     123.62        98.59
46035>                 over (min)        5.00         5.00
46036>      Storage Coeff.  (min)=       1.14 (ii)    1.36 (ii)
46037>      Unit Hyd. Tpeak (min)=       5.00         5.00
46038>      Unit Hyd. peak  (cms)=       0.34         0.33
46039>                                                      *TOTALS*
46040>      PEAK FLOW       (cms)=       0.40         0.00          0.408 (iii)
46041>      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
46042>      RUNOFF VOLUME    (mm)=      91.81        61.38          91.50
46043>      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
46044>      RUNOFF COEFFICIENT   =       0.98         0.65           0.98
46045>
46046> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
46047>
46048>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
46049>            CN*  =  86.0    Ia = Dep. Storage  (Above)
46050>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
46051>            THAN THE STORAGE COEFFICIENT.
46052>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
46053>
46054> ------------------------------------------------------------------------------
46055>
46056> --------------------
46057> | ADD HYD  (******)|
46058> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
46059> --------------------          (ha)    (cms)    (hrs)     (mm)
46060>         ID1= 1 (******):     0.71   0.125     6.08    59.37
46061>       + ID2= 2 (******):     1.92   0.315     6.08    59.41
46062>         ================================================
46063>         ID = 3 (******):     2.63   0.441     6.08    59.40
46064>
46065>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46066> ------------------------------------------------------------------------------
46067>
46068> --------------------
46069> | ADD HYD  (******)|
46070> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
46071> --------------------          (ha)    (cms)    (hrs)     (mm)
46072>         ID1= 3 (******):     2.63   0.441     6.08    59.40
46073>       + ID2= 2 (******):     8.29   2.842     6.00    91.50
46074>         ================================================
46075>         ID = 1 (******):    10.92   3.245     6.00    83.77
46076>
46077>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46078> ------------------------------------------------------------------------------
46079>
46080> --------------------
46081> | ADD HYD  (******)|
46082> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
46083> --------------------          (ha)    (cms)    (hrs)     (mm)
46084>         ID1= 1 (******):    10.92   3.245     6.00    83.77
46085>       + ID2= 2 (******):     1.19   0.408     6.00    91.50
46086>         ================================================
46087>         ID = 3 (******):    12.11   3.653     6.00    84.53
46088>
46089>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46090> ------------------------------------------------------------------------------
46091>
46092> --------------------
46093> | ADD HYD  (******)|
46094> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
46095> --------------------          (ha)    (cms)    (hrs)     (mm)
46096>         ID1= 3 (******):    12.11   3.653     6.00    84.53
46097>       + ID2= 2 (******):     3.14   0.449     6.08    63.84
46098>         ================================================
46099>         ID = 1 (******):    15.25   4.076     6.00    80.27
46100>
46101>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46102> ------------------------------------------------------------------------------
46103>
46104> --------------------
46105> | ADD HYD  (******)|
46106> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
46107> --------------------          (ha)    (cms)    (hrs)     (mm)
46108>         ID1= 1 (******):    15.25   4.076     6.00    80.27
46109>       + ID2= 2 (******):     3.52   0.540     6.08    63.31
46110>         ================================================
46111>         ID = 3 (******):    18.77   4.612     6.00    77.09
46112>
46113>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46114> ------------------------------------------------------------------------------
46115>
46116> --------------------
46117> | ADD HYD  (******)|
46118> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
46119> --------------------          (ha)    (cms)    (hrs)     (mm)
46120>         ID1= 3 (******):    18.77   4.612     6.00    77.09
46121>       + ID2= 2 (******):     6.18   0.865     6.00    70.97
46122>         ================================================
46123>         ID = 1 (******):    24.94   5.478     6.00    75.58
46124>
46125>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46126> ------------------------------------------------------------------------------
46127> --------------------
46128> | RESERVOIR(******)|     OVERFLOW IS ON
46129> | IN= 2---> OUT= 1 |
46130> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
46131> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
46132>                            0.0000      0.0000  |    1.0509      1.2511
46133>                            0.0499      0.1231  |    1.2225      1.4841
46134>                            0.0887      0.3106  |    1.2743      1.5652
46135>                            0.1027      0.4143  |    1.3240      1.6479
46136>                            0.1415      0.5824  |    1.5681      1.7322
46137>                            0.4137      0.7655  |    1.9730      1.8182
46138>                            0.8423      1.0330  |    2.4824      1.9059
46139>
46140>                                  AREA     QPEAK     TPEAK       R.V.
46141>                                  (ha)     (cms)     (hrs)       (mm)
46142>    INFLOW : ID= 2 (******)     24.943      5.478      6.00      75.58
46143>    OUTFLOW: ID= 1 (******)     24.943      0.909      6.58      75.55
46144>    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00
46145>
46146>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
46147>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
46148>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00
46149>
46150>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.59
46151>                    TIME SHIFT OF PEAK FLOW          (min)= 35.00
46152>                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.1031
46153>
46154> ------------------------------------------------------------------------------
46155>
46156>   --------------------------
46157>   | Junction Command(30361002) |
46158>   --------------------------
46159>
46160>                               AREA     QPEAK   TPEAK     R.V.
46161>                               (ha)     (cms)    (hrs)     (mm)
46162>   INFLOW : ID= 3(30361001)    0.00      0.00    0.00      0.00
46163>   OUTFLOW: ID= 2(30361002)    0.00      0.00    0.00      0.00
46164>
46165>   ---------------------------------------------------------------------------
46166> --------------------
46167> | CALIB            |
46168> | NASHYD   (******)|   Area     (ha)=   0.70   Curve Number    (CN)= 85.0
46169> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
46170> --------------------   U.H. Tp(hrs)=   0.21
46171>
46172>      Unit Hyd Qpeak  (cms)=   0.127
46173>
46174>      PEAK FLOW       (cms)=   0.121 (i)
46175>      TIME TO PEAK    (hrs)=   6.083
46176>      RUNOFF VOLUME    (mm)=  59.386
46177>      TOTAL RAINFALL   (mm)=  93.808
46178>      RUNOFF COEFFICIENT   =   0.633
46179>
46180>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
46181>
46182> ------------------------------------------------------------------------------
46183>
46184> --------------------
46185> | ADD HYD  ( 50360)|
46186> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
46187> --------------------          (ha)    (cms)    (hrs)     (mm)
46188> *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
46189> *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
46190>         ID1= 1 (******):     24.94   0.909     6.58    75.55
46191>       + ID2= 2 (******):      0.00   0.000     0.00     0.00
46192>         ================================================
46193>         ID = 3 ( 50360):     24.94   0.909     6.58    75.55
46194>
46195>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46196> ------------------------------------------------------------------------------
46197>
46198> --------------------
46199> | ADD HYD  ( 50360)|
46200> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
46201> --------------------          (ha)    (cms)    (hrs)     (mm)
46202>         ID1= 3 ( 50360):     24.94   0.909     6.58    75.55
46203>       + ID2= 2 (******):      0.70   0.121     6.08    59.39
46204>         ================================================
46205>         ID = 1 ( 50360):     25.64   0.943     6.58    75.11
46206>
```

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      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50360):    25.64   0.943     6.58    75.11
      + ID2= 2 ( 60350):   707.75  47.111     6.42    68.36
        ================================================
        ID = 3 ( 50360):   733.39  48.044     6.42    68.60

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.30        0.0450
                    6.00         127.39        0.0450
                   12.00         127.46        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04        0.0450
                   72.00         123.15        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY   TRAV.TIME
         (m)       (m)      (cu.m.)       (cms)         (m/s)      (min)
        0.09   122.98    .246E+03        0.4          0.31       10.02
        0.33   123.21    .251E+04       11.8          0.86        3.57
        0.56   123.45    .538E+04       39.9          1.37        2.25
        0.80   123.68    .842E+04       81.1          1.78        1.73
        1.04   123.92    .116E+05      134.5          2.13        1.44
        1.27   124.16    .150E+05      200.0          2.46        1.25
        1.51   124.39    .185E+05      278.3          2.78        1.11
        1.74   124.63    .220E+05      367.4          3.08        1.00
        1.98   124.86    .257E+05      466.7          3.35        0.92
        2.22   125.10    .294E+05      576.1          3.61        0.85
        2.45   125.34    .332E+05      695.4          3.86        0.80
        2.69   125.57    .371E+05      824.8          4.10        0.75
        2.92   125.81    .410E+05      963.8          4.33        0.71
        3.16   126.04    .451E+05     1112.3          4.55        0.68
        3.39   126.28    .492E+05     1270.1          4.76        0.65
        3.63   126.51    .534E+05     1437.3          4.97        0.62
        3.87   126.75    .576E+05     1613.7          5.16        0.60
        4.10   126.99    .620E+05     1791.1          5.33        0.58
        4.34   127.22    .665E+05     1970.4          5.47        0.56

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)   733.39    48.04    6.42  68.60      0.61      1.43
   OUTFLOW: ID= 1 ( 60390)   733.39    47.85    6.42  68.60      0.61      1.43


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number   (CN)= 80.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   3.064 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  49.399
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.527

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40390):    20.55   3.064     6.08    49.40
      + ID2= 2 ( 60390):   733.39  47.855     6.42    68.60
        ================================================
        ID = 3 ( 50390):   753.94  49.112     6.42    68.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area     (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83          6.10
     Dep. Storage     (mm)=       2.00          6.08
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     345.74         42.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     123.62        136.76
                 over (min)        5.00         15.00
     Storage Coeff.  (min)=       4.77 (ii)    12.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.22          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.13          1.50          4.471 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81         60.57          76.92
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.65           0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         127.70        0.0450
                   18.00         126.87        0.0450
                   24.00         125.30        0.0450
                   30.00         123.90        0.0450
                   36.00         123.14        0.0450
                   42.00         123.07        0.0450
                   48.00         122.88        0.0450
                   54.00         122.90        0.0450
                   60.00         122.95        0.0450
                   66.00         123.04    0.0450 /0.0350  Main Channel
                   72.00         122.86        0.0350      Main Channel
                   78.00         122.98        0.0450
                   84.00         122.97        0.0450
                   90.00         122.96        0.0450
                   96.00         122.92        0.0450
                  102.00         123.50        0.0450
                  108.00         124.18        0.0450
                  120.00         127.45        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY   TRAV.TIME
         (m)       (m)      (cu.m.)       (cms)         (m/s)      (min)
        0.12   122.98    .275E+03        0.7          0.35        6.78
        0.36   123.21    .218E+04       14.7          0.95        2.47
        0.59   123.45    .437E+04       44.6          1.44        1.63
        0.83   123.68    .670E+04       87.2          1.84        1.28
        1.06   123.92    .916E+04      141.6          2.19        1.08
        1.30   124.16    .117E+05      208.1          2.51        0.94
        1.54   124.39    .144E+05      287.0          2.82        0.84
        1.77   124.63    .171E+05      376.7          3.11        0.76
        2.01   124.86    .199E+05      476.5          3.38        0.70
        2.24   125.10    .228E+05      586.1          3.64        0.65
        2.48   125.33    .257E+05      705.6          3.88        0.61
        2.71   125.57    .287E+05      835.1          4.12        0.57
        2.95   125.80    .317E+05      974.0          4.35        0.54
        3.19   126.04    .348E+05     1122.3          4.56        0.52
        3.42   126.28    .379E+05     1279.8          4.77        0.49
        3.66   126.51    .411E+05     1446.6          4.97        0.47
        3.89   126.75    .444E+05     1622.6          5.17        0.46
        4.13   126.98    .477E+05     1786.6          5.29        0.45
        4.36   127.22    .513E+05     1942.9          5.36        0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     4.47    6.00  76.92      0.19      0.42
   OUTFLOW: ID= 1 ( 60370)   17.93     3.73    6.00  76.92      0.17      0.40


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--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50390):   753.94  49.112     6.42    68.07
      + ID2= 2 ( 60370):    17.93   3.732     6.00    76.92
        ================================================
        ID = 3 ( 50400):   771.87  50.542     6.42    68.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         125.01        0.0450
                   20.00         123.70        0.0450
                   25.00         123.04        0.0450
                   30.00         120.84        0.0450
                   35.00         119.81    0.0450 /0.0350  Main Channel
                   40.00         119.74        0.0350      Main Channel
                   65.00         120.12        0.0450
                   90.00         120.58        0.0450
                  100.00         125.02        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY   TRAV.TIME
         (m)       (m)      (cu.m.)       (cms)         (m/s)      (min)
        0.07   119.81    .209E+03        0.1          0.27       34.81
        0.35   120.09    .326E+04        4.7          0.83       11.50
        0.62   120.36    .916E+04       21.3          1.34        7.16
        0.90   120.63    .176E+05       51.5          1.68        5.69
        1.17   120.91    .270E+05       96.6          2.05        4.67
        1.44   121.18    .367E+05      153.8          2.41        3.98
        1.72   121.46    .466E+05      222.1          2.74        3.50
        1.99   121.73    .567E+05      300.7          3.05        3.14
        2.26   122.00    .669E+05      389.1          3.34        2.87
        2.54   122.28    .774E+05      487.1          3.62        2.65
        2.81   122.55    .880E+05      594.2          3.88        2.47
        3.09   122.82    .988E+05      710.4          4.13        2.32
        3.36   123.10    .110E+06      834.4          4.36        2.20
        3.63   123.37    .121E+06      964.4          4.57        2.10
        3.91   123.65    .133E+06     1104.4          4.76        2.01
        4.18   123.92    .145E+06     1250.0          4.93        1.94
        4.45   124.19    .159E+06     1406.7          5.09        1.88
        4.73   124.47    .172E+06     1575.5          5.25        1.82
        5.00   124.74    .187E+06     1756.1          5.39        1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)   771.87    50.54    6.42  68.28      0.89      1.67
   OUTFLOW: ID= 1 ( 60400)   771.87    50.21    6.50  68.28      0.88      1.66


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--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area     (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26          5.65
     Dep. Storage     (mm)=       2.00          9.48
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     229.75        574.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     123.62         30.89
                 over (min)        5.00         90.00
     Storage Coeff.  (min)=       4.09 (ii)    85.83 (ii)
     Unit Hyd. Tpeak (min)=       5.00         90.00
     Unit Hyd. peak  (cms)=       0.24          0.01
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.67          0.22          0.707 (iii)
     TIME TO PEAK    (hrs)=       6.00          7.42           6.00
     RUNOFF VOLUME    (mm)=      91.81         47.35          58.49
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.50           0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40410):     7.92   0.707     6.00    58.49
      + ID2= 2 ( 60400):   771.87  50.209     6.50    68.28
        ================================================
        ID = 3 ( 50410):   779.79  50.410     6.50    68.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.199 (i)
```

```
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.433
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.197

      PEAK FLOW       (cms)=   0.198 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.425
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.633

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.12   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

      Unit Hyd Qpeak  (cms)=   0.477

      PEAK FLOW       (cms)=   0.531 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  59.465
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     4.12   0.531     6.17    59.46
      + ID2= 2 (******):     1.24   0.198     6.08    59.42
        ================================================
        ID = 3 (******):     5.36   0.718     6.17    59.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     5.36   0.718     6.17    59.46
      + ID2= 2 (******):     1.28   0.199     6.08    59.43
        ================================================
        ID = 1 (******):     6.64   0.909     6.17    59.45

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area    (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      20.95         46.62
      Dep. Storage     (mm)=       2.00          7.70
      Average Slope     (%)=       1.90          1.90
      Length            (m)=     671.17         89.00
      Mannings n           =      0.015         0.240

      Max.Eff.Inten.(mm/hr)=     123.62         91.11
                    over (min)        5.00         20.00
      Storage Coeff.  (min)=       6.61 (ii)    18.34 (ii)
      Unit Hyd. Tpeak (min)=       5.00         20.00
      Unit Hyd. peak  (cms)=       0.18          0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       5.40          6.30          9.869 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.17           6.00
      RUNOFF VOLUME    (mm)=      91.81         53.14          62.81
      TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
      RUNOFF COEFFICIENT   =       0.98          0.57           0.67


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  81.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40420):    67.57   9.869     6.00    62.81
      + ID2= 2 (******):     6.64   0.909     6.17    59.45
        ================================================
        ID = 3 (******):    74.21  10.620     6.00    62.50

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50420)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    74.21  10.620     6.00    62.50
      + ID2= 2 ( 60420):   779.79  50.410     6.50    68.18
        ================================================
        ID = 1 ( 50420):   854.00  55.512     6.50    67.69

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         121.79        0.0450
                  12.00         116.08        0.0450
                  40.00         115.59    0.0450 /0.0350  Main Channel
                  44.00         114.89        0.0350      Main Channel
                  48.00         114.52        0.0350      Main Channel
                  52.00         115.72    0.0350 /0.0450  Main Channel
                  56.00         115.93        0.0450
                  60.00         117.24        0.0450
                  64.00         119.04        0.0450
                  68.00         120.69        0.0450
                  72.00         121.01        0.0450
                  74.00         121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36   114.88    .645E+03       0.7          0.83      14.38
        0.71   115.23    .236E+04       4.6          1.41       8.47
        1.07   115.59    .489E+04      12.6          1.84       6.48
        1.44   115.96    .112E+05      30.9          1.97       6.04
        1.80   116.33    .227E+05      69.1          2.17       5.49
        2.17   116.70    .351E+05     125.6          2.56       4.65
        2.54   117.06    .479E+05     197.5          2.95       4.04
        2.91   117.43    .612E+05     283.9          3.32       3.59
        3.28   117.80    .749E+05     384.1          3.66       3.25
        3.65   118.17    .891E+05     497.4          3.99       2.99
        4.02   118.54    .104E+06     623.5          4.30       2.77
        4.39   118.91    .119E+06     762.2          4.59       2.60
        4.76   119.28    .134E+06     913.1          4.87       2.45
        5.13   119.65    .150E+06    1076.2          5.13       2.32
        5.49   120.02    .166E+06    1251.7          5.38       2.21
        5.86   120.39    .183E+06    1439.5          5.62       2.12
        6.23   120.75    .200E+06    1634.3          5.84       2.04
        6.60   121.12    .219E+06    1831.3          5.99       1.99
        6.97   121.49    .238E+06    2058.5          6.20       1.92

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
    INFLOW : ID= 2 ( 50420)  854.00    55.51    6.50  67.69      1.67       2.10
    OUTFLOW: ID= 1 ( 60420)  854.00    54.53    6.58  67.69      1.66       2.09


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.41         11.03
      Dep. Storage     (mm)=       2.00          7.80
      Average Slope     (%)=       3.50          3.50
      Length            (m)=     465.00        102.00
      Mannings n           =      0.015         0.320

      Max.Eff.Inten.(mm/hr)=     123.62         83.64
                    over (min)        5.00         20.00
      Storage Coeff.  (min)=       4.42 (ii)    17.45 (ii)
      Unit Hyd. Tpeak (min)=       5.00         20.00
      Unit Hyd. peak  (cms)=       0.23          0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       6.97          1.39          7.957 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.17           6.00
      RUNOFF VOLUME    (mm)=      91.81         50.13          76.80
      TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
      RUNOFF COEFFICIENT   =       0.98          0.53           0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.3    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40430):    32.43   7.957     6.00    76.80
      + ID2= 2 ( 60420):   854.00  54.530     6.58    67.69
        ================================================
        ID = 3 ( 50430):   886.43  56.141     6.50    68.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         116.29        0.0450
                  20.00         114.05        0.0450
                  25.00         110.83        0.0450
                  30.00         109.36        0.0450
                  35.00         108.23    0.0450 /0.0350  Main Channel
                  40.00         107.52        0.0350      Main Channel
                  45.00         108.00    0.0350 /0.0450  Main Channel
                  50.00         107.84        0.0450
                  55.00         108.21        0.0450
                  60.00         108.95        0.0450
                  65.00         109.35        0.0450
                  70.00         109.41        0.0450
                  75.00         109.48        0.0450
                  80.00         109.77        0.0450
                  85.00         112.20        0.0450
                  90.00         115.48        0.0450
                 100.00         116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.24   107.76    .285E+03       0.4          0.74      12.74
        0.48   108.00    .146E+04       2.6          1.01       9.32
        0.97   108.49    .695E+04      23.3          1.90       4.97
        1.46   108.97    .141E+05      64.5          2.60       3.63
        1.94   109.46    .233E+05     116.9          2.84       3.33
        2.43   109.95    .371E+05     214.6          3.28       2.88
        2.92   110.44    .519E+05     350.2          3.83       2.47
        3.41   110.92    .675E+05     515.9          4.34       2.18
        3.89   111.41    .836E+05     711.3          4.82       1.96
        4.38   111.90    .100E+06     933.4          5.28       1.79
        4.87   112.39    .117E+06    1182.4          5.71       1.65
        5.35   112.87    .135E+06    1458.0          6.13       1.54
        5.84   113.36    .153E+06    1758.3          6.52       1.45
        6.33   113.85    .171E+06    2082.9          6.90       1.37
        6.82   114.34    .190E+06    2410.6          7.19       1.31
        7.30   114.82    .210E+06    2758.9          7.43       1.27
        7.79   115.31    .232E+06    3143.1          7.68       1.23
        8.28   115.80    .255E+06    3473.3          7.71       1.23
        8.77   116.29    .282E+06    3812.4          7.67       1.23

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
    INFLOW : ID= 2 ( 50430)  886.43    56.14    6.50  68.02      1.36       2.42
    OUTFLOW: ID= 1 ( 60430)  886.43    56.23    6.58  68.02      1.36       2.42


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      37.70         19.42
      Dep. Storage     (mm)=       2.00          6.60
      Average Slope     (%)=       2.50          2.50
      Length            (m)=     617.06         45.00
      Mannings n           =      0.015         0.290

      Max.Eff.Inten.(mm/hr)=     123.62         75.87
                    over (min)        5.00         15.00
      Storage Coeff.  (min)=       5.79 (ii)    14.44 (ii)
      Unit Hyd. Tpeak (min)=       5.00         15.00
      Unit Hyd. peak  (cms)=       0.20          0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=      12.12          2.37         14.158 (iii)
      TIME TO PEAK    (hrs)=       6.00          6.08           6.00
      RUNOFF VOLUME    (mm)=      91.81         44.45          75.23
      TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
      RUNOFF COEFFICIENT   =       0.98          0.47           0.80


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  74.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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46819>
46820> --------------------
46821> | ADD HYD  ( 50440)|
46822> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
46823> --------------------           (ha)    (cms)    (hrs)     (mm)
46824>         ID1= 1 ( 40440):    57.11  14.158     6.00    75.23
46825>       + ID2= 2 ( 60430):   886.43  56.227     6.58    68.02
46826>         ====================================================
46827>         ID = 3 ( 50440):   943.55  58.335     6.58    68.46
46828>
46829>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46830> ------------------------------------------------------------------------------
46831> --------------------
46832> | ROUTE CHN( 60440)|
46833> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
46834> --------------------
46835>                <------ DATA FOR SECTION (   1.1) ------>
46836>                Distance      Elevation       Manning
46837>                    0.00         104.01        0.0450
46838>                   10.00         103.90        0.0450
46839>                   20.00         103.74        0.0450
46840>                   30.00         103.66        0.0450
46841>                   40.00         103.60        0.0450
46842>                   50.00         102.52        0.0450
46843>                   60.00         101.16        0.0450
46844>                   70.00         100.60        0.0450
46845>                   80.00         100.17        0.0450
46846>                   90.00          99.85        0.0450
46847>                  100.00          97.89        0.0350      Main Channel
46848>                  110.00          97.62        0.0350      Main Channel
46849>                  120.00          99.12        0.0450
46850>                  130.00          99.16        0.0450
46851>                  140.00          99.36        0.0450
46852>                  150.00          99.66        0.0450
46853>                  160.00          99.68        0.0450
46854>                  180.00          99.76        0.0450
46855>                  190.00         104.10        0.0450
46856>
46857>       <---------------------- TRAVEL TIME TABLE ----------------------->
46858>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
46859>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
46860>         0.27    97.89    .102E+04        1.2         0.77      13.74
46861>         0.60    98.21    .381E+04        9.4         1.56       6.74
46862>         0.92    98.53    .738E+04       24.3         2.08       5.05
46863>         1.24    98.86    .117E+05       46.2         2.50       4.22
46864>         1.56    99.18    .171E+05       76.6         2.84       3.71
46865>         1.89    99.50    .264E+05      124.5         2.98       3.53
46866>         2.21    99.82    .403E+05      189.1         2.96       3.56
46867>         2.53   100.15    .597E+05      286.1         3.03       3.48
46868>         2.85   100.47    .809E+05      417.7         3.26       3.23
46869>         3.17   100.79    .104E+06      580.2         3.53       2.98
46870>         3.50   101.11    .128E+06      771.7         3.81       2.77
46871>         3.82   101.44    .153E+06      996.3         4.10       2.57
46872>         4.14   101.76    .179E+06     1248.4         4.40       2.40
46873>         4.46   102.08    .206E+06     1526.4         4.68       2.25
46874>         4.79   102.40    .233E+06     1829.8         4.96       2.13
46875>         5.11   102.73    .261E+06     2156.4         5.22       2.02
46876>         5.43   103.05    .290E+06     2507.0         5.47       1.93
46877>         5.75   103.37    .319E+06     2882.7         5.71       1.85
46878>         6.08   103.69    .350E+06     3194.7         5.77       1.83
46879>
46880>                                    <---- hydrograph ---->   <-pipe / channel->
46881>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
46882>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
46883>    INFLOW : ID= 2 ( 50440)  943.55    58.33    6.58  68.46      1.37      2.62
46884>    OUTFLOW: ID= 1 ( 60440)  943.55    58.10    6.58  68.46      1.37      2.62
46885>
46886>
46887>
46888> ------------------------------------------------------------------------------
46889> --------------------
46890> | CALIB            |
46891> | STANDHYD ( 40450)|   Area    (ha)=  30.40
46892> |ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
46893> --------------------
46894>                                IMPERVIOUS    PERVIOUS (i)
46895>      Surface Area     (ha)=      13.37         17.02
46896>      Dep. Storage     (mm)=       2.00          6.90
46897>      Average Slope     (%)=       0.80          0.80
46898>      Length            (m)=     450.16        150.00
46899>      Mannings n           =      0.015         0.300
46900>
46901>      Max.Eff.Inten.(mm/hr)=     123.62         44.00
46902>                  over (min)        5.00         40.00
46903>      Storage Coeff.  (min)=       6.74 (ii)    38.56 (ii)
46904>      Unit Hyd. Tpeak (min)=       5.00         40.00
46905>      Unit Hyd. peak  (cms)=       0.18          0.03
46906>                                                      *TOTALS*
46907>      PEAK FLOW       (cms)=       3.97          1.22          4.438 (iii)
46908>      TIME TO PEAK    (hrs)=       6.00          6.50          6.00
46909>      RUNOFF VOLUME    (mm)=      91.81         47.80         65.85
46910>      TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
46911>      RUNOFF COEFFICIENT   =       0.98          0.51          0.70
46912>
46913>
46914>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
46915>              CN*  =  77.0    Ia = Dep. Storage  (Above)
46916>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
46917>              THAN THE STORAGE COEFFICIENT.
46918>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
46919>
46920> ------------------------------------------------------------------------------
46921>
46922> --------------------
46923> | ADD HYD  ( 50450)|
46924> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
46925> --------------------           (ha)    (cms)    (hrs)     (mm)
46926>         ID1= 1 ( 40450):    30.40   4.438     6.00    65.85
46927>       + ID2= 2 ( 60440):   943.55  58.099     6.58    68.46
46928>         ====================================================
46929>         ID = 3 ( 50450):   973.94  59.740     6.58    68.37
46930>
46931>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
46932> ------------------------------------------------------------------------------
46933> --------------------
46934> | ROUTE CHN( 60450)|
46935> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
46936> --------------------
46937>                <------ DATA FOR SECTION (   1.1) ------>
46938>                Distance      Elevation       Manning
46939>                    0.00          97.16        0.0450
46940>                    3.00          96.00        0.0450
46941>                    6.00          95.32        0.0450
46942>                    9.00          94.64        0.0450
46943>                   12.00          94.43        0.0450
46944>                   15.00          94.29        0.0450
46945>                   18.00          94.10        0.0350      Main Channel
46946>                   21.00          94.02        0.0350      Main Channel
46947>                   24.00          93.70        0.0350      Main Channel
46948>                   27.00          94.22    0.0350 /0.0450  Main Channel
46949>                   30.00          94.90        0.0450
46950>                   32.00          95.30        0.0450
46951>                   34.00          95.78        0.0450
46952>                   36.00          96.25        0.0450
46953>                   38.00          96.60        0.0450
46954>                   48.00          97.14        0.0450
46955>
46956>       <---------------------- TRAVEL TIME TABLE ----------------------->
46957>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
46958>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
46959>         0.13    93.83    .942E+02        0.1         0.39      30.45
46960>         0.27    93.96    .377E+03        0.3         0.62      19.18
46961>         0.40    94.09    .911E+03        0.9         0.69      17.28
46962>         0.59    94.29    .230E+04        3.4         1.06      11.15
46963>         0.78    94.48    .428E+04        7.9         1.32       8.98
46964>         0.97    94.67    .679E+04       14.6         1.53       7.74
46965>         1.16    94.86    .963E+04       23.7         1.75       6.77
46966>         1.35    95.05    .127E+05       34.9         1.96       6.07
46967>         1.54    95.24    .160E+05       48.1         2.14       5.54
46968>         1.73    95.43    .196E+05       63.6         2.31       5.13
46969>         1.92    95.62    .233E+05       81.2         2.48       4.79
46970>         2.11    95.81    .273E+05      101.0         2.63       4.51
46971>         2.30    96.00    .315E+05      123.0         2.78       4.27
46972>         2.49    96.19    .360E+05      147.8         2.93       4.06
46973>         2.68    96.38    .406E+05      174.6         3.07       3.87
46974>         2.87    96.57    .454E+05      203.7         3.20       3.71
46975>         3.06    96.76    .505E+05      232.7         3.28       3.62
46976>         3.25    96.95    .562E+05      264.9         3.36       3.54
46977>         3.44    97.14    .624E+05      300.8         3.43       3.46
46978>
46979>                                    <---- hydrograph ---->   <-pipe / channel->
46980>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
46981>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
46982>    INFLOW : ID= 2 ( 50450)  973.94    59.74    6.58  68.37      1.68      2.27
46983>    OUTFLOW: ID= 1 ( 60450)  973.94    59.15    6.67  68.37      1.68      2.26
46984>
46985>
46986>
46987> ------------------------------------------------------------------------------
46988> --------------------
46989> | CALIB            |
46990> | STANDHYD ( 40460)|   Area    (ha)=  22.40
46991> |ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
46992> --------------------
46993>                                IMPERVIOUS    PERVIOUS (i)
46994>      Surface Area     (ha)=      15.36          7.04
46995>      Dep. Storage     (mm)=       2.00          6.68
46996>      Average Slope     (%)=       2.40          2.40
46997>      Length            (m)=     386.43         40.00
46998>      Mannings n           =      0.015         0.280
46999>
47000>      Max.Eff.Inten.(mm/hr)=     123.62        127.15
47001>                  over (min)        5.00         15.00
47002>      Storage Coeff.  (min)=       4.43 (ii)    10.92 (ii)
47003>      Unit Hyd. Tpeak (min)=       5.00         15.00
47004>      Unit Hyd. peak  (cms)=       0.23          0.09
47005>                                                      *TOTALS*
47006>      PEAK FLOW       (cms)=       3.98          1.65          5.439 (iii)
47007>      TIME TO PEAK    (hrs)=       6.00          6.08          6.00
47008>      RUNOFF VOLUME    (mm)=      91.81         51.99         73.03
47009>      TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
47010>      RUNOFF COEFFICIENT   =       0.98          0.55          0.78
47011>
47012> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
47013>
47014>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
47015>              CN*  =  72.5    Ia = Dep. Storage  (Above)
47016>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
47017>              THAN THE STORAGE COEFFICIENT.
47018>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
47019>
47020> ------------------------------------------------------------------------------
47021>
47022> --------------------
47023> | ADD HYD  ( 50460)|
47024> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
47025> --------------------           (ha)    (cms)    (hrs)     (mm)
47026>         ID1= 1 ( 40460):    22.40   5.439     6.00    73.03
47027>       + ID2= 2 ( 60450):   973.94  59.155     6.67    68.37
47028>         ====================================================
47029>         ID = 3 ( 50460):   996.34  59.828     6.67    68.48
47030>
47031>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
47032> ------------------------------------------------------------------------------
47033> --------------------
47034> | ROUTE CHN( 60460)|
47035> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
47036> --------------------
47037>                <------ DATA FOR SECTION (   1.1) ------>
47038>                Distance      Elevation       Manning
47039>                    0.00          91.61        0.0450
47040>                    3.00          91.57        0.0450
47041>                    6.00          91.15        0.0450
47042>                    9.00          90.70        0.0450
47043>                   12.00          89.72        0.0450
47044>                   15.00          88.86        0.0450
47045>                   18.00          88.38    0.0450 /0.0350  Main Channel
47046>                   21.00          87.96        0.0350      Main Channel
47047>                   24.00          88.18    0.0350 /0.0450  Main Channel
47048>                   26.00          88.19        0.0450
47049>                   28.00          88.30        0.0450
47050>                   30.00          90.32        0.0450
47051>                   32.00          90.49        0.0450
47052>                   34.00          90.80        0.0450
47053>                   36.00          90.85        0.0450
47054>                   38.00          90.97        0.0450
47055>                   40.00          91.15        0.0450
47056>                   42.00          91.29        0.0450
47057>                   44.00          91.40        0.0450
47058>                   46.00          91.56        0.0450
47059>
47060>       <---------------------- TRAVEL TIME TABLE ----------------------->
47061>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
47062>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
47063>         0.11    88.07    .589E+02        0.0         0.34      23.89
47064>         0.21    88.18    .235E+03        0.3         0.54      15.05
47065>         0.41    88.38    .106E+04        1.8         0.85       9.64
47066>         0.61    88.57    .211E+04        5.3         1.22       6.69
47067>         0.81    88.77    .330E+04       10.2         1.51       5.40
47068>         1.01    88.97    .462E+04       16.6         1.76       4.63
47069>         1.21    89.17    .603E+04       24.5         1.99       4.10
47070>         1.41    89.37    .753E+04       33.8         2.19       3.72
47071>         1.61    89.57    .912E+04       44.4         2.38       3.42
47072>         1.81    89.77    .108E+05       56.4         2.56       3.19
47073>         2.00    89.97    .125E+05       69.9         2.72       2.99
47074>         2.20    90.17    .144E+05       84.7         2.88       2.83
47075>         2.40    90.37    .163E+05       99.8         3.00       2.72
47076>         2.60    90.56    .184E+05      114.7         3.04       2.68
47077>         2.80    90.76    .208E+05      132.8         3.13       2.61
47078>         3.00    90.96    .235E+05      148.4         3.09       2.64
47079>         3.20    91.16    .266E+05      170.7         3.13       2.60
47080>         3.40    91.36    .302E+05      194.9         3.16       2.58
47081>         3.60    91.56    .342E+05      223.5         3.20       2.55
47082>
47083>                                    <---- hydrograph ---->   <-pipe / channel->
47084>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
47085>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
47086>    INFLOW : ID= 2 ( 50460)  996.34    59.83    6.67  68.48      1.86      2.60
47087>    OUTFLOW: ID= 1 ( 60460)  996.34    59.48    6.67  68.48      1.85      2.59
47088>
47089>
47090>
47091> ------------------------------------------------------------------------------
47092> --------------------
47093> | CALIB            |
47094> | STANDHYD ( 40470)|   Area    (ha)=  90.19
47095> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
47096> --------------------
47097>                                IMPERVIOUS    PERVIOUS (i)
47098>      Surface Area     (ha)=      59.53         30.66
47099>      Dep. Storage     (mm)=       2.00          5.90
47100>      Average Slope     (%)=       1.40          1.40
47101>      Length            (m)=     775.42         40.00
47102>      Mannings n           =      0.015         0.280
47103>
47104>      Max.Eff.Inten.(mm/hr)=     123.62        118.64
47105>                  over (min)       10.00         20.00
47106>      Storage Coeff.  (min)=       7.90 (ii)    15.75 (ii)
47107>      Unit Hyd. Tpeak (min)=      10.00         20.00
47108>      Unit Hyd. peak  (cms)=       0.13          0.07
47109>                                                      *TOTALS*
47110>      PEAK FLOW       (cms)=      14.14          5.51         18.121 (iii)
47111>      TIME TO PEAK    (hrs)=       6.00          6.17          6.00
47112>      RUNOFF VOLUME    (mm)=      91.81         53.91         74.37
47113>      TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
47114>      RUNOFF COEFFICIENT   =       0.98          0.57          0.79
47115>
47116>
47117>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
47118>              CN*  =  76.1    Ia = Dep. Storage  (Above)
47119>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
47120>              THAN THE STORAGE COEFFICIENT.
47121>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
47122>
47123> ------------------------------------------------------------------------------
47124>
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47125> --------------------
47126> | ADD HYD  ( 50470)|
47127> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
47128> --------------------         (ha)    (cms)    (hrs)     (mm)
47129>         ID1= 1 ( 40470):    90.19  18.121     6.00    74.37
47130>       + ID2= 2 ( 60460):   996.34  59.480     6.67    68.48
47131>         ================================================
47132>         ID = 3 ( 50470):  1086.53  63.310     6.67    68.97
47133>
47134>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
47135> ------------------------------------------------------------------------------
47136> --------------------
47137> | ROUTE CHN( 60470)|
47138> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
47139> --------------------
47140>                <------ DATA FOR SECTION (   1.1) ------>
47141>                Distance      Elevation       Manning
47142>                    0.00          89.19        0.0450
47143>                    2.00          88.89        0.0450
47144>                    4.00          88.54        0.0450
47145>                    6.00          88.31        0.0450
47146>                    8.00          88.14        0.0450
47147>                   10.00          88.02        0.0450
47148>                   12.00          87.99        0.0450
47149>                   14.00          87.90        0.0450
47150>                   16.00          87.84        0.0450
47151>                   19.00          87.55        0.0450
47152>                   22.00          86.85        0.0450
47153>                   25.00          86.23        0.0350      Main Channel
47154>                   28.00          86.23        0.0350      Main Channel
47155>                   31.00          86.60        0.0450
47156>                   34.00          87.49        0.0450
47157>                   37.00          88.15        0.0450
47158>                   41.00          88.21        0.0450
47159>                   45.00          88.29        0.0450
47160>                   48.00          88.36        0.0450
47161>                   50.00          89.13        0.0450
47162>
47163>       <---------------------- TRAVEL TIME TABLE ----------------------->
47164>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
47165>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
47166>         0.01   86.23    .467E+01        0.0         0.03     307.39
47167>         0.16   86.38    .381E+03        0.3         0.45      22.82
47168>         0.31   86.54    .942E+03        1.0         0.65      15.77
47169>         0.46   86.69    .167E+04        2.3         0.85      12.10
47170>         0.61   86.84    .253E+04        4.2         1.03       9.95
47171>         0.77   86.99    .350E+04        6.7         1.18       8.66
47172>         0.92   87.15    .458E+04        9.8         1.32       7.78
47173>         1.07   87.30    .576E+04       13.5         1.44       7.13
47174>         1.22   87.45    .706E+04       17.7         1.54       6.63
47175>         1.38   87.60    .847E+04       22.5         1.63       6.28
47176>         1.53   87.76    .101E+05       27.8         1.69       6.05
47177>         1.68   87.91    .119E+05       33.3         1.72       5.97
47178>         1.83   88.06    .142E+05       39.8         1.72       5.96
47179>         1.99   88.21    .170E+05       47.4         1.71       5.97
47180>         2.14   88.36    .206E+05       57.3         1.71       5.99
47181>         2.29   88.52    .247E+05       70.7         1.76       5.81
47182>         2.44   88.67    .289E+05       86.1         1.83       5.59
47183>         2.60   88.82    .332E+05      103.2         1.91       5.36
47184>         2.75   88.97    .376E+05      121.7         1.99       5.15
47185>
47186>                                      <---- hydrograph ---->   <-pipe / channel->
47187>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
47188>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
47189>    INFLOW : ID= 2 ( 50470) 1086.53    63.31    6.67  68.97      2.21      1.73
47190>    OUTFLOW: ID= 1 ( 60470) 1086.53    62.40    6.75  68.97      2.20      1.73
47191>
47192>
47193>
47194> ------------------------------------------------------------------------------
47195> --------------------
47196> | CALIB             |
47197> | STANDHYD ( 40480)|   Area    (ha)=  56.43
47198> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
47199> --------------------
47200>                                IMPERVIOUS    PERVIOUS (i)
47201>      Surface Area     (ha)=       42.82         13.61
47202>      Dep. Storage     (mm)=        2.00          5.80
47203>      Average Slope     (%)=        1.90          1.90
47204>      Length            (m)=      613.35         40.00
47205>      Mannings n           =       0.015         0.260
47206>
47207>      Max.Eff.Inten.(mm/hr)=      123.62        170.00
47208>                  over (min)        5.00         15.00
47209>      Storage Coeff.  (min)=        6.26 (ii)    10.98 (ii)
47210>      Unit Hyd. Tpeak (min)=        5.00         15.00
47211>      Unit Hyd. peak  (cms)=        0.19          0.09
47212>                                                      *TOTALS*
47213>      PEAK FLOW       (cms)=       10.74          4.35         14.674 (iii)
47214>      TIME TO PEAK    (hrs)=        6.00          6.08          6.00
47215>      RUNOFF VOLUME    (mm)=       91.81         62.73         79.88
47216>      TOTAL RAINFALL   (mm)=       93.81         93.81         93.81
47217>      RUNOFF COEFFICIENT   =        0.98          0.67          0.85
47218>
47219>
47220>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
47221>              CN*  =  78.9    Ia = Dep. Storage  (Above)
47222>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
47223>            THAN THE STORAGE COEFFICIENT.
47224>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
47225>
47226> ------------------------------------------------------------------------------
47227>
47228> --------------------
47229> | ADD HYD  ( 50480)|
47230> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
47231> --------------------         (ha)    (cms)    (hrs)     (mm)
47232>         ID1= 1 ( 40480):    56.43  14.674     6.00    79.88
47233>       + ID2= 2 ( 60470):  1086.53  62.397     6.75    68.97
47234>         ================================================
47235>         ID = 3 ( 50480):  1142.96  63.960     6.75    69.50
47236>
47237>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
47238> ------------------------------------------------------------------------------
47239> --------------------
47240> | ROUTE CHN( 60480)|
47241> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
47242> --------------------
47243>                <------ DATA FOR SECTION (   1.1) ------>
47244>                Distance      Elevation       Manning
47245>                    0.00          86.90        0.0450
47246>                    2.00          86.76        0.0450
47247>                    4.00          85.96        0.0450
47248>                    6.00          85.44        0.0450
47249>                    8.00          84.83        0.0450
47250>                   10.00          84.50        0.0450
47251>                   12.00          84.15        0.0450
47252>                   14.00          83.85        0.0350      Main Channel
47253>                   16.00          83.86        0.0350      Main Channel
47254>                   18.00          83.99    0.0350 /0.0450  Main Channel
47255>                   20.00          84.27        0.0450
47256>                   22.00          84.55        0.0450
47257>                   24.00          84.88        0.0450
47258>                   26.00          85.37        0.0450
47259>                   27.00          85.68        0.0450
47260>                   28.00          85.91        0.0450
47261>                   29.00          86.08        0.0450
47262>                   30.00          86.21        0.0450
47263>                   31.00          86.29        0.0450
47264>                   34.00          86.87        0.0450
47265>
47266>       <---------------------- TRAVEL TIME TABLE ----------------------->
47267>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
47268>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
47269>         0.16   84.01    .165E+03        0.3         0.48      10.34
47270>         0.32   84.17    .460E+03        1.2         0.77       6.41
47271>         0.48   84.33    .855E+03        2.8         0.98       5.07
47272>         0.64   84.48    .135E+04        5.2         1.14       4.35
47273>         0.80   84.64    .193E+04        8.3         1.28       3.88
47274>         0.95   84.80    .261E+04       12.3         1.40       3.53
47275>         1.11   84.96    .337E+04       17.4         1.53       3.23
47276>         1.27   85.12    .419E+04       23.5         1.66       2.97
47277>         1.43   85.28    .506E+04       30.5         1.79       2.77
47278>         1.59   85.44    .599E+04       38.5         1.90       2.60
47279>         1.75   85.60    .697E+04       47.3         2.01       2.46
47280>         1.91   85.76    .801E+04       57.1         2.12       2.34
47281>         2.07   85.92    .911E+04       67.8         2.21       2.24
47282>         2.23   86.07    .103E+05       79.5         2.30       2.15
47283>         2.39   86.23    .115E+05       91.9         2.37       2.09
47284>         2.54   86.39    .128E+05      105.7         2.45       2.02
47285>         2.70   86.55    .142E+05      121.2         2.53       1.95
47286>         2.86   86.71    .156E+05      138.0         2.62       1.89
47287>         3.02   86.87    .171E+05      153.0         2.65       1.87
47288>
47289>                                      <---- hydrograph ---->   <-pipe / channel->
47290>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
47291>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
47292>    INFLOW : ID= 2 ( 50480) 1142.96    63.96    6.75  69.50      2.01      2.18
47293>    OUTFLOW: ID= 1 ( 60480) 1142.96    63.91    6.75  69.50      2.01      2.18
47294>
47295>
47296>
47297> ------------------------------------------------------------------------------
47298> --------------------
47299> | CALIB             |
47300> | STANDHYD ( 40490)|   Area    (ha)=  16.76
47301> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
47302> --------------------
47303>                                IMPERVIOUS    PERVIOUS (i)
47304>      Surface Area     (ha)=       12.60          4.16
47305>      Dep. Storage     (mm)=        2.00          6.22
47306>      Average Slope     (%)=        1.40          1.40
47307>      Length            (m)=      334.28         53.00
47308>      Mannings n           =       0.015         0.270
47309>
47310>      Max.Eff.Inten.(mm/hr)=      123.62        156.01
47311>                  over (min)        5.00         15.00
47312>      Storage Coeff.  (min)=        4.77 (ii)    12.92 (ii)
47313>      Unit Hyd. Tpeak (min)=        5.00         15.00
47314>      Unit Hyd. peak  (cms)=        0.22          0.08
47315>                                                      *TOTALS*
47316>      PEAK FLOW       (cms)=        3.38          1.14          4.399 (iii)
47317>      TIME TO PEAK    (hrs)=        6.00          6.08          6.00
47318>      RUNOFF VOLUME    (mm)=       91.81         60.96         79.60
47319>      TOTAL RAINFALL   (mm)=       93.81         93.81         93.81
47320>      RUNOFF COEFFICIENT   =        0.98          0.65          0.85
47321>
47322> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
47323>
47324>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
47325>              CN*  =  78.9    Ia = Dep. Storage  (Above)
47326>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
47327>            THAN THE STORAGE COEFFICIENT.
47328>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
47329>
47330> ------------------------------------------------------------------------------
47331>
47332> --------------------
47333> | ADD HYD  ( 50490)|
47334> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
47335> --------------------         (ha)    (cms)    (hrs)     (mm)
47336>         ID1= 1 ( 40490):    16.76   4.399     6.00    79.60
47337>       + ID2= 2 ( 60480):  1142.96  63.910     6.75    69.50
47338>         ================================================
47339>         ID = 3 ( 50490):  1159.72  64.379     6.75    69.65
47340>
47341>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
47342> ------------------------------------------------------------------------------
47343> --------------------
47344> | ROUTE CHN( 60490)|
47345> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
47346> --------------------
47347>                <------ DATA FOR SECTION (   1.1) ------>
47348>                Distance      Elevation       Manning
47349>                    0.00          85.84        0.0450
47350>                    6.00          84.32        0.0450
47351>                   12.00          84.21        0.0450
47352>                   18.00          84.12        0.0450
47353>                   24.00          84.08        0.0450
47354>                   30.00          84.10        0.0450
47355>                   36.00          84.03        0.0450
47356>                   42.00          83.92        0.0450
47357>                   48.00          83.88        0.0450
47358>                   54.00          82.88        0.0350      Main Channel
47359>                   60.00          83.12    0.0350 /0.0450  Main Channel
47360>                   64.00          83.65        0.0450
47361>                   68.00          83.60        0.0450
47362>                   72.00          83.67        0.0450
47363>                   76.00          83.70        0.0450
47364>                   80.00          83.82        0.0450
47365>                   84.00          83.90        0.0450
47366>                   88.00          84.05        0.0450
47367>                   92.00          84.16        0.0450
47368>                  100.00          85.83        0.0450
47369>
47370>       <---------------------- TRAVEL TIME TABLE ----------------------->
47371>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
47372>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
47373>         0.16   83.04    .332E+03        0.1         0.32      46.08
47374>         0.31   83.19    .129E+04        0.8         0.57      26.14
47375>         0.47   83.35    .259E+04        2.3         0.79      18.75
47376>         0.62   83.50    .418E+04        4.5         0.96      15.43
47377>         0.78   83.66    .626E+04        7.3         1.04      14.28
47378>         0.93   83.81    .101E+05       11.9         1.05      14.10
47379>         1.09   83.97    .153E+05       17.6         1.02      14.55
47380>         1.24   84.13    .231E+05       26.2         1.00      14.73
47381>         1.40   84.28    .341E+05       41.2         1.07      13.79
47382>         1.55   84.44    .460E+05       61.7         1.19      12.44
47383>         1.71   84.59    .582E+05       86.6         1.32      11.21
47384>         1.86   84.75    .706E+05      115.2         1.45      10.21
47385>         2.02   84.90    .831E+05      147.5         1.57       9.39
47386>         2.17   85.06    .959E+05      183.2         1.70       8.72
47387>         2.33   85.21    .109E+06      222.2         1.81       8.16
47388>         2.48   85.37    .122E+06      264.5         1.93       7.68
47389>         2.64   85.52    .135E+06      310.0         2.03       7.27
47390>         2.79   85.68    .149E+06      358.5         2.14       6.91
47391>         2.95   85.83    .162E+06      410.1         2.24       6.60
47392>
47393>                                      <---- hydrograph ---->   <-pipe / channel->
47394>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
47395>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
47396>    INFLOW : ID= 2 ( 50490) 1159.72    64.38    6.75  69.65      1.57      1.20
47397>    OUTFLOW: ID= 1 ( 60490) 1159.72    62.93    6.83  69.65      1.56      1.20
47398>
47399>
47400>
47401> ------------------------------------------------------------------------------
47402> --------------------
47403> | CALIB             |
47404> | STANDHYD ( 40810)|   Area    (ha)=  20.64
47405> |ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
47406> --------------------
47407>                                IMPERVIOUS    PERVIOUS (i)
47408>      Surface Area     (ha)=       15.92          4.72
47409>      Dep. Storage     (mm)=        2.00          5.43
47410>      Average Slope     (%)=        2.10          2.10
47411>      Length            (m)=      370.92         40.00
47412>      Mannings n           =       0.015         0.260
47413>
47414>      Max.Eff.Inten.(mm/hr)=      123.62        169.04
47415>                  over (min)        5.00         10.00
47416>      Storage Coeff.  (min)=        4.49 (ii)     8.91 (ii)
47417>      Unit Hyd. Tpeak (min)=        5.00         10.00
47418>      Unit Hyd. peak  (cms)=        0.23          0.12
47419>                                                      *TOTALS*
47420>      PEAK FLOW       (cms)=        4.24          1.71          5.952 (iii)
47421>      TIME TO PEAK    (hrs)=        6.00          6.00          6.00
47422>      RUNOFF VOLUME    (mm)=       91.81         62.66         80.51
47423>      TOTAL RAINFALL   (mm)=       93.81         93.81         93.81
47424>      RUNOFF COEFFICIENT   =        0.98          0.67          0.86
47425>
47426> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
47427>
47428>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
47429>              CN*  =  78.8    Ia = Dep. Storage  (Above)
47430>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40810):    20.64   5.952     6.00    80.51
      + ID2= 2 ( 60490):  1159.72  62.933     6.83    69.65
        ================================================
        ID = 3 ( 50810):  1180.36  63.381     6.83    69.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     123.62        90.05
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.12 (ii)   11.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.27         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.56         1.08          1.497 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      91.81        47.31         55.09
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.50          0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40500):     9.32   1.497     6.00    55.09
      + ID2= 2 ( 50810):  1180.36  63.381     6.83    69.84
        ================================================
        ID = 3 ( 50500):  1189.69  63.604     6.83    69.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.153 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.415
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89         0.04
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=     115.50         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     123.62        96.12
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       3.37 (ii)    3.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.26         0.26
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.33         0.01          1.337 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81        59.48         91.48
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.63          0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     123.62        96.12
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.00 (ii)    2.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.31         0.31
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15         0.00          0.154 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81        59.48         91.48
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.63          0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25        13.25

     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     420.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     123.62       147.59
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.51 (ii)    6.19 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.67         4.71          7.378 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81        66.95         74.41
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.71          0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000  |    1.8600      0.9862
                          0.0560      0.3250  |    2.1000      1.0580
                          0.2600      0.4718  |    2.2000      1.2000
                          0.7400      0.6512  |   10.0000      1.2500
                          1.4100      0.8427  |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     26.500     7.378     6.00       74.41
   OUTFLOW: ID= 1 (******)     26.500     2.042     6.25       74.35
   OVERFLOW:ID= 3 (  0003)      0.000     0.000     0.00        0.00

                TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                PEAK   FLOW   REDUCTION [Qout/Qin](%)= 27.68
                TIME SHIFT OF PEAK FLOW         (min)= 15.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  1.0430

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  --------------------------
  | Junction Command(30651006) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651003)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651006)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    26.50   2.042     6.25    74.35
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    26.50   2.042     6.25    74.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    26.50   2.042     6.25    74.35
      + ID2= 2 (******):     0.93   0.153     6.08    59.41
        ================================================
        ID = 1 (******):    27.43   2.161     6.25    73.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    27.43   2.161     6.25    73.85
      + ID2= 2 (******):     3.93   1.337     6.00    91.48
        ================================================
        ID = 3 (******):    31.36   2.809     6.00    76.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    31.36   2.809     6.00    76.06
      + ID2= 2 (******):     0.45   0.154     6.00    91.48
        ================================================
        ID = 1 (******):    31.81   2.964     6.00    76.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   1.512 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  59.476
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62   1.512     6.33    59.48
      + ID2= 2 (******):    31.81   2.964     6.00    76.27
        ================================================
        ID = 3 (******):    46.43   3.887     6.00    70.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         443.75        0.0450
                    8.50         443.74        0.0450
                   35.47         443.64        0.0450
                   64.60         443.29        0.0450
                   74.71         443.18        0.0450
```

```
                  80.25        443.17        0.0450
                 112.17        443.12    0.0450 /0.0350  Main Channel
                 131.57        442.76        0.0350      Main Channel
                 137.50        442.66        0.0350      Main Channel
                 137.91        442.67        0.0350      Main Channel
                 152.28        442.24        0.0350      Main Channel
                 167.40        441.39        0.0350      Main Channel
                 178.29        441.56        0.0350      Main Channel
                 216.75        442.01        0.0350      Main Channel
                 221.54        442.05    0.0350 /0.0450  Main Channel
                 334.66        442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.05  441.45    .114E+03       0.0          0.27      55.89
        0.11  441.50    .457E+03       0.2          0.43      35.21
        0.16  441.56    .103E+04       0.6          0.57      26.87
        0.22  441.61    .185E+04       1.4          0.67      22.84
        0.27  441.67    .297E+04       2.5          0.77      19.84
        0.33  441.72    .437E+04       4.1          0.87      17.59
        0.38  441.78    .605E+04       6.4          0.96      15.85
        0.44  441.83    .802E+04       9.2          1.05      14.47
        0.49  441.89    .103E+05      12.8          1.14      13.35
        0.55  441.94    .128E+05      17.2          1.23      12.42
        0.60  442.00    .157E+05      22.4          1.31      11.63
        0.66  442.05    .188E+05      28.3          1.38      11.07
        0.71  442.11    .225E+05      36.9          1.50      10.16
        0.78  442.17    .277E+05      48.4          1.60       9.54
        0.84  442.24    .339E+05      61.9          1.67       9.13
        0.91  442.30    .412E+05      77.1          1.71       8.90
        0.97  442.36    .495E+05      94.7          1.75       8.71
        1.03  442.43    .589E+05     114.9          1.79       8.54
        1.10  442.49    .693E+05     137.9          1.82       8.38

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   46.43     3.89    6.00  70.98      0.32      0.85
   OUTFLOW: ID= 1 (******)   46.43     3.42    6.50  70.98      0.31      0.82


--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53

                          AREA     QPEAK     TPEAK    R.V.
                          (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  46.43      3.42      6.50   70.98
     ================================================
     ID= 2  (   2)    :  31.46      1.00      6.50   70.98
     ID= 3  (   2)    :  14.97      2.42      6.50   70.98
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        443.75        0.0000
                   8.50        443.74        0.0450
                  35.47        443.64        0.0450
                  64.60        443.29        0.0450
                  74.71        443.18        0.0450
                  80.25        443.17        0.0450
                 112.17        443.12    0.0450 /0.0350  Main Channel
                 131.57        442.76        0.0350      Main Channel
                 137.50        442.66        0.0350      Main Channel
                 137.91        442.67        0.0350      Main Channel
                 152.28        442.24        0.0350      Main Channel
                 167.40        441.39        0.0350      Main Channel
                 178.29        441.56        0.0350      Main Channel
                 216.75        442.01        0.0350      Main Channel
                 221.54        442.05    0.0350 /0.0450  Main Channel
                 334.66        442.50        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.05  441.45    .128E+03       0.0          0.29      60.12
        0.11  441.50    .514E+03       0.2          0.45      37.87
        0.16  441.56    .116E+04       0.7          0.59      28.90
        0.22  441.61    .208E+04       1.4          0.70      24.57
        0.27  441.67    .333E+04       2.6          0.80      21.34
        0.33  441.72    .490E+04       4.3          0.91      18.92
        0.38  441.78    .680E+04       6.6          1.01      17.05
        0.44  441.83    .901E+04       9.6          1.10      15.57
        0.49  441.89    .115E+05      13.4          1.19      14.36
        0.55  441.94    .144E+05      18.0          1.28      13.36
        0.60  442.00    .176E+05      23.4          1.37      12.51
        0.66  442.05    .211E+05      29.5          1.44      11.91
        0.71  442.11    .253E+05      38.5          1.57      10.93
        0.78  442.17    .311E+05      50.5          1.67      10.26
        0.84  442.24    .381E+05      64.7          1.74       9.82
        0.91  442.30    .463E+05      80.5          1.79       9.57
        0.97  442.36    .556E+05      98.9          1.83       9.37
        1.03  442.43    .661E+05     120.0          1.86       9.19
        1.10  442.49    .779E+05     144.1          1.90       9.01

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   31.46      1.00    6.50  70.98      0.19      0.64
   OUTFLOW: ID= 1 (******)   31.46      0.99    7.58  70.98      0.19      0.63


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.24   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.432 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  59.476
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA     QPEAK     TPEAK      R.V.
--------------------         (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (******):     4.24     0.432     6.33     59.48
      + ID2= 2 (******):    31.46     0.990     7.58     70.98
        ================================================
        ID = 3 (******):    35.70     1.270     6.50     69.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.363 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.454
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA     QPEAK     TPEAK      R.V.
--------------------         (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (******):     2.59     0.363     6.17     59.45
      + ID2= 2 (******):    35.70     1.270     6.50     69.61
        ================================================
        ID = 3 (******):    38.29     1.530     6.33     68.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        429.12        0.0500
                  37.54        428.86        0.0500
                  53.31        428.70        0.0500
                  81.17        428.24        0.0500
                  99.28        428.15    0.0500 /0.0300  Main Channel
                 114.53        427.72        0.0300      Main Channel
                 119.88        426.51        0.0300      Main Channel
                 124.17        425.84        0.0300      Main Channel
                 206.01        425.90        0.0300      Main Channel
                 209.64        426.51        0.0300      Main Channel
                 214.21        426.89        0.0300      Main Channel
                 231.49        427.17        0.0300      Main Channel
                 268.61        427.89    0.0300 /0.0500  Main Channel
                 351.58        428.15        0.0500
                 368.27        428.31        0.0500
                 405.75        428.52        0.0500
                 416.79        428.59        0.0500
                 440.06        428.76        0.0500
                 469.88        428.97        0.0500

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16  426.00    .187E+04       9.2          0.88       3.40
        0.31  426.16    .424E+04      35.4          1.49       2.00
        0.47  426.32    .666E+04      74.1          1.98       1.50
        0.63  426.47    .914E+04     123.7          2.41       1.23
        0.79  426.63    .117E+05     182.8          2.79       1.07
        0.94  426.79    .143E+05     251.2          3.13       0.95
        1.10  426.95    .170E+05     323.1          3.39       0.88
        1.26  427.10    .199E+05     394.0          3.52       0.84
        1.42  427.26    .232E+05     479.1          3.69       0.81
        1.57  427.42    .267E+05     577.3          3.86       0.77
        1.73  427.58    .304E+05     687.4          4.03       0.74
        1.89  427.73    .344E+05     808.6          4.20       0.71
        2.05  427.89    .387E+05     927.4          4.28       0.70
        2.23  428.07    .449E+05    1119.2          4.45       0.67
        2.41  428.25    .531E+05    1356.2          4.56       0.65
        2.59  428.43    .627E+05    1638.9          4.66       0.64
        2.77  428.61    .737E+05    1955.8          4.73       0.63
        2.95  428.79    .859E+05    2310.2          4.79       0.62
        3.13  428.97    .996E+05    2701.5          4.84       0.61

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   38.29      1.53    6.33  68.93      0.03      0.88
   OUTFLOW: ID= 1 (******)   38.29      1.52    6.42  68.93      0.03      0.88


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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.081 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.342
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  11.13   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.42

     Unit Hyd Qpeak  (cms)=   1.012

     PEAK FLOW       (cms)=   1.208 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  59.475
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.126 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.402
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area     (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------

                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=           54.14         24.23
     Dep. Storage     (mm)=            2.00          5.78
     Average Slope     (%)=            1.20          1.20
     Length            (m)=          722.82         47.00
     Mannings n             =          0.015         0.260

     Max.Eff.Inten.(mm/hr)=          123.62        133.77
```

```
                over (min)       10.00         20.00
     Storage Coeff.  (min)=       7.93 (ii)    16.19 (ii)
     Unit Hyd. Tpeak (min)=      10.00         20.00
     Unit Hyd. peak  (cms)=       0.13          0.06
                                                    *TOTALS*
     PEAK FLOW       (cms)=      12.78          4.91          16.372 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17           6.00
     RUNOFF VOLUME    (mm)=      91.81         58.60          77.28
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.62           0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60600)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        144.07        0.0450
                   9.00        143.84        0.0450
                  12.00        142.90        0.0450
                  15.00        142.48        0.0450
                  18.00        142.43    0.0450 /0.0350  Main Channel
                  21.00        142.31        0.0350      Main Channel
                  24.00        142.12        0.0350      Main Channel
                  27.00        142.44    0.0350 /0.0450  Main Channel
                  30.00        142.71        0.0450
                  33.00        143.18        0.0450
                  36.00        143.27        0.0450
                  37.00        143.36        0.0450
                  38.00        143.64        0.0450
                  39.00        143.92        0.0450
                  40.00        143.93        0.0450
                  45.00        144.18        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   142.20    .282E+02       0.0         0.24       26.26
        0.16   142.27    .113E+03       0.1         0.38       16.54
        0.23   142.35    .257E+03       0.3         0.48       13.09
        0.31   142.43    .477E+03       0.7         0.57       11.02
        0.42   142.54    .969E+03       2.0         0.76        8.24
        0.53   142.65    .157E+04       3.8         0.92        6.80
        0.64   142.76    .224E+04       6.3         1.06        5.90
        0.75   142.87    .299E+04       9.5         1.19        5.26
        0.86   142.98    .379E+04      13.2         1.31        4.77
        0.97   143.09    .463E+04      17.6         1.43        4.37
        1.08   143.20    .552E+04      22.5         1.53        4.09
        1.19   143.31    .653E+04      27.9         1.60        3.90
        1.30   143.42    .761E+04      34.4         1.70        3.69
        1.41   143.53    .874E+04      41.7         1.79        3.49
        1.52   143.64    .989E+04      49.7         1.89        3.32
        1.63   143.75    .111E+05      58.3         1.98        3.17
        1.74   143.85    .123E+05      66.9         2.04        3.06
        1.85   143.96    .137E+05      73.2         2.01        3.11
        1.96   144.07    .153E+05      81.5         2.00        3.13

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40600)   78.37    16.37    6.00  77.28      0.94      1.39
   OUTFLOW: ID= 1 ( 60600)   78.37    15.89    6.08  77.28      0.92      1.38


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--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area    (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75          2.18
     Dep. Storage     (mm)=       2.00          8.00
     Average Slope     (%)=       2.90          2.90
     Length            (m)=     162.03         40.00
     Mannings n           =      0.015         0.340

     Max.Eff.Inten.(mm/hr)=     123.62        104.20
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.48 (ii)     9.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.29          0.11
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.43          0.45           0.882 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81         51.06          63.94
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.54           0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40610):     3.94    0.882     6.00    63.94
      + ID2= 2 ( 60600):    78.37   15.890     6.08    77.28
        ================================================
        ID = 3 ( 50600):    82.31   16.439     6.08    76.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        143.40        0.0450
                   2.00        142.92        0.0450
                   4.00        142.14        0.0450
                   6.00        141.49        0.0450
                   8.00        141.11        0.0450
                  10.00        141.00    0.0450 /0.0350  Main Channel
                  12.00        140.98        0.0350      Main Channel
                  14.00        140.82        0.0350      Main Channel
                  16.00        141.02    0.0350 /0.0450  Main Channel
                  18.00        141.19        0.0450
                  20.00        141.19        0.0450
                  22.00        141.44        0.0450
                  24.00        142.00        0.0450
                  26.00        142.20        0.0450
                  28.00        142.39        0.0450
                  30.00        142.96        0.0450
                  31.00        143.13        0.0450
                  32.00        143.28        0.0450
                  33.00        143.41        0.0450
                  34.00        143.44        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09   140.91    .314E+02       0.0         0.24       23.12
        0.18   141.00    .132E+03       0.1         0.31       17.83
        0.33   141.14    .502E+03       0.9         0.58        9.54
        0.47   141.29    .107E+04       2.4         0.74        7.47
        0.61   141.43    .175E+04       4.7         0.89        6.20
        0.75   141.57    .251E+04       7.9         1.05        5.31
        0.89   141.71    .332E+04      11.8         1.19        4.68
        1.03   141.85    .416E+04      16.5         1.32        4.21
        1.17   141.99    .506E+04      21.8         1.44        3.86
        1.31   142.13    .601E+04      27.5         1.52        3.64
        1.45   142.27    .705E+04      34.0         1.61        3.46
        1.59   142.41    .818E+04      41.5         1.69        3.29
        1.73   142.55    .936E+04      50.2         1.79        3.11
        1.88   142.69    .106E+05      59.8         1.88        2.95
        2.02   142.84    .118E+05      70.2         1.97        2.81
        2.16   142.98    .132E+05      81.2         2.06        2.70
        2.30   143.12    .145E+05      92.6         2.12        2.61
        2.44   143.26    .159E+05     104.8         2.19        2.54
        2.58   143.40    .174E+05     117.7         2.24        2.47

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50600)   82.31    16.44    6.08  76.64      1.03      1.32
   OUTFLOW: ID= 1 ( 60610)   82.31    15.41    6.17  76.64      0.99      1.28


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--------------------
| CALIB            |
| STANDHYD ( 40620)|   Area    (ha)=   5.67
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.30          1.37
     Dep. Storage     (mm)=       2.00          5.59
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     194.41         43.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62        161.04
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       3.37 (ii)    10.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.26          0.09
                                                    *TOTALS*
     PEAK FLOW       (cms)=       1.17          0.42           1.555 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81         61.92          80.05
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.66           0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40620):     5.67   1.555     6.00    80.05
      + ID2= 2 ( 60610):    82.31  15.412     6.17    76.64
        ================================================
        ID = 3 ( 50610):    87.98  16.111     6.08    76.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        142.03        0.0450
                   1.00        141.71        0.0450
                   2.00        141.35        0.0450
                   3.00        141.01        0.0450
                   4.00        140.79        0.0450
                   5.00        140.56        0.0450
                   6.00        140.44        0.0450
                   7.00        140.30    0.0450 /0.0350  Main Channel
                   8.00        140.08        0.0350      Main Channel
                   9.00        139.88        0.0350      Main Channel
                  10.00        139.97        0.0350      Main Channel
                  11.00        140.12        0.0350      Main Channel
                  12.00        140.35    0.0350 /0.0450  Main Channel
                  13.00        140.52        0.0450
                  14.00        140.73        0.0450
                  15.00        140.97        0.0450
                  16.00        141.27        0.0450
                  17.00        141.57        0.0450
                  18.00        141.89        0.0450
                  19.00        142.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02       0.0         0.36        8.21
        0.21   140.09    .579E+02       0.2         0.59        5.04
        0.31   140.19    .120E+03       0.5         0.78        3.79
        0.42   140.30    .200E+03       1.1         0.95        3.12
        0.53   140.41    .313E+03       2.1         1.18        2.51
        0.65   140.53    .456E+03       3.5         1.36        2.18
        0.76   140.65    .630E+03       5.3         1.50        1.98
        0.88   140.76    .826E+03       7.6         1.63        1.82
        0.99   140.88    .104E+04      10.3         1.75        1.69
        1.11   140.99    .128E+04      13.4         1.87        1.59
        1.23   141.11    .154E+04      17.1         1.98        1.50
        1.34   141.22    .180E+04      21.2         2.09        1.42
        1.46   141.34    .209E+04      25.8         2.20        1.35
        1.57   141.45    .239E+04      30.9         2.30        1.29
        1.69   141.57    .270E+04      36.4         2.40        1.24
        1.80   141.69    .303E+04      42.4         2.49        1.19
        1.92   141.80    .337E+04      48.9         2.58        1.15
        2.04   141.92    .373E+04      55.9         2.67        1.11
        2.15   142.03    .411E+04      63.2         2.74        1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98    16.11    6.08  76.86      1.19      1.95
   OUTFLOW: ID= 1 ( 60620)   87.98    16.25    6.17  76.86      1.20      1.96


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91          1.23
     Dep. Storage     (mm)=       2.00          7.60
     Average Slope     (%)=       1.70          1.70
     Length            (m)=     119.23         45.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     123.62        102.15
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.42 (ii)    11.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.09
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.23          0.22           0.428 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81         51.89          64.50
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.55           0.69
```

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40640):    2.13   0.428     6.00    64.50
      + ID2= 2 ( 60620):   87.98  16.250     6.17    76.86
        ====================================================
        ID = 3 ( 50630):   90.11  16.493     6.17    76.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     123.62       121.96
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       5.07 (ii)   12.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.21         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.59         1.58          4.984 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81        57.25          75.45
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.61           0.80


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40630):   20.54   4.984     6.00    75.45
      + ID2= 2 ( 50630):   90.11  16.493     6.17    76.57
        ====================================================
        ID = 3 ( 50640):  110.65  19.240     6.08    76.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000  |    3.4010      4.4390
                           0.0530      0.4910  |    4.8380      5.5060
                           0.0890      0.7040  |    5.8470      5.5380
                           0.2040      1.0890  |    6.5980      5.9190
                           0.3240      1.4800  |    7.2560      6.2250
                           0.3890      1.7490  |    7.9030      6.4820
                           0.4470      1.9970  |    8.4910      6.6820
                           0.5090      2.3490  |   12.0680      7.1150
                           0.7420      2.9150  |   20.0000      7.2000
                           1.7580      3.6690  |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
  INFLOW : ID= 2 ( 50640)    110.646    19.240      6.08      76.36
  OUTFLOW: ID= 1 (******)    110.646     4.185      6.92      76.33
  OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.75
                  TIME SHIFT OF PEAK FLOW          (min)= 50.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  5.0252

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  --------------------------
  | Junction Command(30651005) |
  --------------------------

                            AREA     QPEAK   TPEAK     R.V.
                            (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3(30651001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651005)    0.00     0.00    0.00     0.00

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):   110.65   4.185     6.92    76.33
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ====================================================
        ID = 3 (******):   110.65   4.185     6.92    76.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):   110.65   4.185     6.92    76.33
      + ID2= 2 (******):     0.75   0.126     6.08    59.40
        ====================================================
        ID = 1 (******):   111.40   4.205     6.83    76.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    11.13   1.208     6.25    59.47
      + ID2= 2 (******):   111.40   4.205     6.83    76.21
        ====================================================
        ID = 3 (******):   122.53   4.985     6.67    74.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         447.10        0.0450
                  42.83         446.80        0.0450
                  42.89         446.80        0.0450
                  43.24         446.79        0.0450
                 122.57         446.48        0.0450
                 154.02         446.22        0.0450
                 191.79         446.32    0.0450 /0.0350  Main Channel
                 199.05         442.27        0.0350      Main Channel
                 199.74         442.33        0.0350      Main Channel
                 212.02         444.19        0.0350      Main Channel
                 232.17         444.54    0.0350 /0.0450  Main Channel
                 348.58         444.42        0.0450
                 359.23         444.30        0.0450
                 381.33         444.03        0.0450
                 483.65         444.18        0.0450
                 548.64         445.87        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.19    442.46    .184E+03       0.1         0.65      24.29
        0.38    442.65    .662E+03       0.7         1.01      15.64
        0.57    442.84    .143E+04       2.0         1.31      12.09
        0.76    443.03    .247E+04       4.1         1.57      10.05
        0.95    443.22    .381E+04       7.3         1.81       8.70
        1.14    443.41    .543E+04      11.7         2.04       7.73
        1.33    443.60    .733E+04      17.5         2.26       6.99
        1.52    443.79    .952E+04      24.8         2.46       6.41
        1.71    443.98    .120E+05      33.7         2.66       5.93
        1.89    444.16    .211E+05      47.0         2.11       7.49
        2.08    444.35    .469E+05      73.0         1.47      10.71
        2.27    444.54    .855E+05     117.6         1.30      12.12
        2.46    444.73    .140E+06     240.0         1.62       9.75
        2.65    444.92    .197E+06     400.4         1.92       8.20
        2.84    445.11    .255E+06     595.0         2.21       7.13
        3.03    445.30    .314E+06     821.8         2.48       6.37
        3.22    445.49    .374E+06    1079.2         2.73       5.78
        3.41    445.68    .436E+06    1366.3         2.96       5.32
        3.60    445.87    .500E+06    1682.3         3.19       4.95

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 (******)  122.53     4.99    6.67  74.69      0.81      1.63
  OUTFLOW: ID= 1 (******)  122.53     4.88    6.83  74.69      0.80      1.62


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.05   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.174

     PEAK FLOW       (cms)=   0.172 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.415
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.10   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.176 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.425
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.99
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.50         1.50
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00        20.00
     Length            (m)=      15.00        15.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     123.62       224.92
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       0.75 (ii)    2.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.28
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.01         0.94          0.947 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        74.71          74.88
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.80           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  17.55
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      14.39         3.16
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     123.62       390.31
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.14 (ii)    2.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.31
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.47         3.44          5.910 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        81.45          85.69
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.87           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
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```
                        (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     1.05   0.172     6.08    59.41
       + ID2= 2 (******):     1.10   0.176     6.08    59.42
         ==================================================
         ID = 3 (******):     2.15   0.348     6.08    59.42

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):     2.15   0.348     6.08    59.42
       + ID2= 2 (******):    17.55   5.910     6.00    85.69
         ==================================================
         ID = 1 (******):    19.70   6.221     6.00    82.83

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    19.70   6.221     6.00    82.83
       + ID2= 2 (******):     2.99   0.947     6.00    74.88
         ==================================================
         ID = 3 (******):    22.69   7.168     6.00    81.78

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):    22.69   7.168     6.00    81.78
       + ID2= 2 (******):     0.42   0.382     6.00    82.59
         ==================================================
         ID = 1 (******):    23.11   7.550     6.00    81.79

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    23.11   7.550     6.00    81.79
       + ID2= 2 (******):     0.91   0.849     6.00    85.69
         ==================================================
         ID = 3 (******):    24.03   8.399     6.00    81.94

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.3352      3.1110
                          0.0933      0.5687   |    0.3714      3.8158
                          0.1848      1.1636   |    0.4043      4.5492
                          0.2439      1.7854   |    0.4445      5.5626
                          0.2910      2.4344   |    0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
    INFLOW : ID= 2 (******)     24.027      8.399      6.00      81.94
    OUTFLOW: ID= 1 (******)     24.027      0.220      8.08      81.88
    OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.62
                    TIME SHIFT OF PEAK FLOW          (min)=125.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.5356
--------------------------------------------------------------------------------

   --------------------------
   | Junction Command(30651004) |
   --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
   INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
   OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00

   --------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
         ID1= 1 (******):    24.03   0.220     8.08    81.88
       + ID2= 2 (******):     0.00   0.000     0.00     0.00
         ==================================================
         ID = 3 (******):    24.03   0.220     8.08    81.88

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):    24.03   0.220     8.08    81.88
       + ID2= 2 (******):     0.45   0.081     6.08    59.34
         ==================================================
         ID = 1 (******):    24.48   0.276     6.08    81.46

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    24.48   0.276     6.08    81.46
       + ID2= 2 (******):   122.53   4.881     6.83    74.69
         ==================================================
         ID = 3 (******):   147.00   5.106     6.83    75.82

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.19   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

      Unit Hyd Qpeak  (cms)=   0.310

      PEAK FLOW       (cms)=   0.320 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  59.446
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.634

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     2.19   0.320     6.08    59.45
       + ID2= 2 (******):   147.00   5.106     6.83    75.82
         ==================================================
         ID = 3 (******):   149.19   5.186     6.75    75.58

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         429.12        0.0450
                   37.54         428.86        0.0450
                   53.31         428.70        0.0450
                   81.17         428.24        0.0450
                   99.28         428.15    0.0450 /0.0350  Main Channel
                  114.53         427.72        0.0350      Main Channel
                  119.88         426.51        0.0350      Main Channel
                  124.17         425.84        0.0350      Main Channel
                  206.01         425.90        0.0350      Main Channel
                  209.64         426.51        0.0350      Main Channel
                  214.21         426.89        0.0350      Main Channel
                  231.49         427.17        0.0350      Main Channel
                  268.61         427.89    0.0350 /0.0450  Main Channel
                  351.58         428.15        0.0450
                  368.27         428.31        0.0450
                  405.75         428.52        0.0450
                  416.79         428.59        0.0450
                  440.06         428.76        0.0450
                  469.88         428.97        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
          (m)      (m)    (cu.m.)       (cms)         (m/s)       (min)
         0.16   426.00    .218E+04         4.1          0.39        8.87
         0.31   426.16    .495E+04        15.8          0.67        5.22
         0.47   426.32    .779E+04        33.2          0.89        3.92
         0.63   426.47    .107E+05        55.4          1.08        3.22
         0.79   426.63    .137E+05        81.8          1.25        2.78
         0.94   426.79    .167E+05       112.4          1.40        2.48
         1.10   426.95    .199E+05       144.6          1.52        2.29
         1.26   427.10    .233E+05       176.4          1.58        2.20
         1.42   427.26    .271E+05       214.5          1.65        2.11
         1.57   427.42    .312E+05       258.4          1.73        2.01
         1.73   427.58    .356E+05       307.7          1.81        1.93
         1.89   427.73    .402E+05       362.0          1.88        1.85
         2.05   427.89    .452E+05       415.1          1.91        1.82
         2.23   428.07    .525E+05       501.3          1.99        1.74
         2.41   428.25    .621E+05       609.1          2.05        1.70
         2.59   428.43    .733E+05       739.1          2.10        1.65
         2.77   428.61    .862E+05       886.8          2.15        1.62
         2.95   428.79    .101E+06      1053.9          2.19        1.59
         3.13   428.97    .116E+06      1240.2          2.22        1.57

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA     QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)     (cms)    (hrs)   (mm)       (m)       (m/s)
    INFLOW : ID= 2 (******)  149.19      5.19     6.75  75.58      0.17       0.41
    OUTFLOW: ID= 1 (******)  149.19      5.09     7.00  75.58      0.17       0.41


--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):   149.19   5.092     7.00    75.58
       + ID2= 2 (******):    38.29   1.520     6.42    68.93
         ==================================================
         ID = 3 (******):   187.49   6.393     6.92    74.22

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

      Unit Hyd Qpeak  (cms)=   0.053

      PEAK FLOW       (cms)=   0.044 (i)
      TIME TO PEAK    (hrs)=   6.000
      RUNOFF VOLUME    (mm)=  59.211
      TOTAL RAINFALL   (mm)=  93.808
      RUNOFF COEFFICIENT   =   0.631

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     0.22   0.044     6.00    59.21
       + ID2= 2 (******):    14.97   2.422     6.50    70.98
         ==================================================
         ID = 3 (******):    15.19   2.432     6.50    70.81

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         433.07        0.0450
                   59.66         432.39        0.0450
                   94.25         432.03        0.0450
                  115.71         431.82        0.0450
                  143.84         431.84    0.0450 /0.0350  Main Channel
                  163.59         431.75        0.0350      Main Channel
                  177.84         431.73        0.0350      Main Channel
                  199.51         431.70        0.0350      Main Channel
                  231.74         431.53        0.0350      Main Channel
                  283.71         431.44        0.0350      Main Channel
                  294.09         431.43        0.0350      Main Channel
                  325.65         431.42        0.0350      Main Channel
                  355.24         431.24        0.0350      Main Channel
                  383.70         431.43        0.0350      Main Channel
                  476.17         432.06    0.0350 /0.0450  Main Channel
                  510.88         432.23        0.0450
                  558.61         432.37        0.0450
                  589.84         432.57        0.0450
                  622.97         432.73        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV       VOLUME    FLOW RATE     VELOCITY   TRAV.TIME
          (m)      (m)    (cu.m.)       (cms)         (m/s)       (min)
         0.08   431.32    .108E+03         0.3          0.30        6.68
         0.15   431.39    .434E+03         1.7          0.47        4.21
         0.23   431.47    .119E+04         5.0          0.50        3.99
         0.30   431.54    .252E+04        13.9          0.66        3.02
         0.38   431.62    .417E+04        29.3          0.84        2.37
         0.45   431.69    .604E+04        50.1          0.99        2.01
         0.53   431.77    .828E+04        73.9          1.06        1.87
         0.60   431.84    .109E+05       108.8          1.19        1.67
         0.68   431.92    .142E+05       159.5          1.34        1.48
         0.76   432.01    .176E+05       219.4          1.48        1.34
         0.84   432.09    .213E+05       290.0          1.62        1.22
         0.92   432.17    .252E+05       374.6          1.77        1.12
         1.01   432.25    .293E+05       469.2          1.91        1.04
         1.09   432.33    .338E+05       573.9          2.02        0.98
         1.17   432.41    .386E+05       689.9          2.13        0.93
         1.25   432.49    .435E+05       817.2          2.24        0.89
         1.33   432.57    .487E+05       955.3          2.34        0.85
         1.41   432.65    .541E+05      1103.5          2.43        0.82
```

```
       1.49   432.73    .597E+05    1262.7          2.52       0.79

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)   15.19     2.43    6.50  70.81      0.17      0.48
   OUTFLOW: ID= 1 (******)   15.19     2.41    6.58  70.81      0.17      0.48


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.090 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.212
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.631

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.499 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  59.465
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     3.87    0.499     6.17    59.46
     + ID2= 2 (******):     0.45    0.090     6.00    59.21
       ================================================
       ID = 3 (******):     4.32    0.562     6.17    59.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 3 (******):     4.32    0.562     6.17    59.44
     + ID2= 2 (******):    15.19    2.406     6.58    70.81
       ================================================
       ID = 1 (******):    19.51    2.740     6.50    68.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         430.79         0.0450
                 23.82         429.79    0.0450 /0.0350  Main Channel
                 44.05         429.11         0.0350      Main Channel
                 70.46         428.15         0.0350      Main Channel
                112.31         427.60         0.0350      Main Channel
                150.77         427.27         0.0350      Main Channel
                179.17         427.15         0.0350      Main Channel
                214.90         427.16         0.0350      Main Channel
                261.89         427.25         0.0350      Main Channel
                317.65         427.56         0.0350      Main Channel
                382.75         427.99         0.0350      Main Channel
                394.40         428.11         0.0350      Main Channel
                432.80         428.07         0.0350      Main Channel
                432.91         428.07         0.0350      Main Channel
                462.57         428.15         0.0350      Main Channel
                522.90         429.79    0.0350 /0.0450  Main Channel
                585.04         429.90         0.0450
                731.92         430.62         0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04      11.5         0.73       2.99
        0.35   427.50    .570E+04      49.9         1.15       1.91
        0.53   427.68    .105E+05     119.2         1.49       1.47
        0.70   427.85    .163E+05     221.8         1.79       1.22
        0.88   428.03    .229E+05     360.8         2.06       1.06
        1.06   428.21    .312E+05     509.7         2.14       1.02
        1.23   428.38    .405E+05     771.0         2.49       0.88
        1.41   428.56    .500E+05    1076.3         2.82       0.77
        1.58   428.73    .598E+05    1423.8         3.12       0.70
        1.76   428.91    .699E+05    1812.5         3.40       0.64
        1.94   429.09    .802E+05    2241.5         3.66       0.60
        2.11   429.26    .907E+05    2709.1         3.91       0.56
        2.29   429.44    .102E+06    3215.8         4.15       0.53
        2.46   429.61    .113E+06    3761.6         4.38       0.50
        2.64   429.79    .124E+06    4346.4         4.59       0.48
        2.85   430.00    .139E+06    5173.9         4.88       0.45
        3.06   430.20    .156E+06    6075.9         5.12       0.43
        3.26   430.41    .173E+06    7054.9         5.33       0.41
        3.47   430.62    .193E+06    8114.3         5.52       0.40

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 (******)   19.51     2.74    6.50  68.29      0.04      0.73
   OUTFLOW: ID= 1 (******)   19.51     2.73    6.58  68.29      0.04      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.159 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.415
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.127 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.310
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.632

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     0.69    0.127     6.00    59.31
     + ID2= 2 (******):     0.97    0.159     6.08    59.41
       ================================================
       ID = 3 (******):     1.66    0.286     6.08    59.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     1.66    0.286     6.08    59.37
     + ID2= 2 (******):    19.51    2.728     6.58    68.29
       ================================================
       ID = 3 (******):    21.17    2.809     6.58    67.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):     21.17      2.81      6.58   67.59
     ================================================
     ID= 2  (   2)    :    21.17      2.81      6.58   67.59
     ID= 3  (   2)    :     0.00      0.00      6.58   67.59
     ID= 4  (   2)    :     0.00      0.00      0.00    0.00
     ID= 5  (   2)    :     0.00      0.00      0.00    0.00
     ID= 6  (   2)    :     0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.96          0.25
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.64          0.54
     Length            (m)=      63.89        157.20
     Mannings n           =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=     123.62         96.12
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       2.05 (ii)     5.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.33          0.06          0.387 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81         59.48          85.02
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.63           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.32          0.58
     Dep. Storage     (mm)=       2.00          4.48
     Average Slope     (%)=       0.70          0.60
     Length            (m)=     166.18        124.91
     Mannings n           =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=     123.62         96.12
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       3.54 (ii)     6.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.26          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.79          0.13          0.920 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81         59.48          85.34
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.63           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (******):     2.90    0.920     6.00    85.34
     + ID2= 2 (******):     1.21    0.387     6.00    85.02
       ================================================
       ID = 3 (******):     4.11    1.308     6.00    85.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.85     0.00     0.00     0.00     0.00     0.85
        0.85     1.00     0.00     0.00     0.00     1.85
        0.85   100.00     0.00     0.00     0.00   100.85

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):      4.11      1.31      6.00   85.25
     ================================================
     ID= 2  (   2)    :     3.73      0.85      6.00   85.25
     ID= 3  (   2)    :     0.38      0.46      6.00   85.25
     ID= 4  (   2)    :     0.00      0.00      0.00    0.00
```

```
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000     6.58    67.59
      + ID2= 2 (******):     3.73   0.847     6.00    85.25
        ================================================
        ID = 3 (******):     3.73   0.847     6.00    85.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     5.20     0.00     0.00     0.00     5.20
        1.00     5.20     0.00     0.00     0.00     6.20
      100.00     5.20     0.00     0.00     0.00   105.20

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):      3.73      0.85      6.00   85.25
     ================================================
      ID= 2  (   2)    :   0.00      0.00      6.00   85.25
      ID= 3  (   2)    :   3.73      0.85      6.00   85.25
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    21.17   2.809     6.58    67.59
      + ID2= 2 (******):     0.00   0.000     6.00    85.25
        ================================================
        ID = 3 (******):    21.17   2.809     6.58    67.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):     21.17      2.81      6.58   67.59
     ================================================
      ID= 2  (   2)    :  21.17      2.81      6.58   67.59
      ID= 3  (   2)    :   0.00      0.00      6.58   67.59
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ------------------------------------------------------------------------------

 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.01     0.00     0.00     0.00     0.00     0.01
        0.06     0.00     0.00     0.00     0.00     0.06
        0.08     0.00     0.00     0.00     0.00     0.08
        0.12     0.00     0.00     0.00     0.00     0.12
        0.20     0.00     0.00     0.00     0.00     0.20
        0.25     0.00     0.00     0.00     0.00     0.25
        0.30     0.00     0.00     0.00     0.00     0.30
        0.33     0.00     0.00     0.00     0.00     0.33
        0.37     0.00     0.00     0.00     0.00     0.37
        0.39     0.00     0.00     0.00     0.00     0.39
        0.42     1.43     0.00     0.00     0.00     1.85
        0.44     8.83     0.00     0.00     0.00     9.27
        0.47    25.03     0.00     0.00     0.00    25.50
        0.49    52.11     0.00     0.00     0.00    52.61
        0.52    91.81     0.00     0.00     0.00    92.33
        0.53   126.04     0.00     0.00     0.00   126.57

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):     21.17      2.81      6.58   67.59
     ================================================
      ID= 2  (   2)    :   6.94      0.42      6.58   67.59
      ID= 3  (   2)    :  14.22      2.39      6.58   67.59
      ID= 4  (   2)    :   0.00      0.00      0.00    0.00
      ID= 5  (   2)    :   0.00      0.00      0.00    0.00
      ID= 6  (   2)    :   0.00      0.00      0.00    0.00
 ------------------------------------------------------------------------------

 --------------------
 | CALIB            |
 | STANDHYD (******)|   Area    (ha)=   0.82
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
 --------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.81         0.01
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.50         1.00
     Length            (m)=      18.40         0.10
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     123.62        96.12
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.05 (ii)    1.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.34
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.00          0.281 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81        59.48         91.48
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.63          0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.82   0.281     6.00    91.48
      + ID2= 2 (******):     0.00   0.000     6.58    67.59
        ================================================
        ID = 3 (******):     0.82   0.281     6.00    91.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 --------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.82   0.281     6.00    91.48
      + ID2= 2 (******):    14.22   2.389     6.58    67.59
        ================================================
        ID = 1 (******):    15.04   2.421     6.50    68.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.03     0.00     0.00     0.00     0.00     0.03
        0.04     0.00     0.00     0.00     0.00     0.04
        0.09     0.00     0.00     0.00     0.00     0.09
        0.12     0.00     0.00     0.00     0.00     0.13
        0.20     0.00     0.00     0.00     0.00     0.20
        0.30     0.00     0.00     0.00     0.00     0.30
        0.37     0.00     0.00     0.00     0.00     0.37
        0.43     0.00     0.00     0.00     0.00     0.43
        0.48     0.00     0.00     0.00     0.00     0.48
        0.52     0.00     0.00     0.00     0.00     0.52
        0.57     0.00     0.00     0.00     0.00     0.57
        0.67     0.00     0.00     0.00     0.00     0.67
        0.68     0.00     0.00     0.00     0.00     0.68
        0.68     0.02     0.00     0.00     0.00     0.70
        0.72     0.56     0.00     0.00     0.00     1.28
        0.73     0.75     0.01     0.00     0.00     1.48
        1.10     1.87     0.54     0.00     0.00     3.51
        1.40     2.25     2.61     0.00     0.00     6.26

                              AREA     QPEAK     TPEAK    R.V.
                               (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):     15.04      2.42      6.50   68.90
     ================================================
      ID= 2  (   3)    :   8.02      0.90      6.50   68.90
      ID= 3  (   3)    :   6.20      1.26      6.50   68.90
      ID= 4  (   3)    :   0.82      0.25      6.50   68.90
      ID= 5  (   3)    :   0.00      0.00      0.00    0.00
      ID= 6  (   3)    :   0.00      0.00      0.00    0.00
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.94   0.421     6.58    67.59
      + ID2= 2 (******):     8.02   0.901     6.50    68.90
        ================================================
        ID = 3 (******):    14.96   1.322     6.50    68.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD (******)|   Area    (ha)=   8.58
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
 --------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.98         3.60
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.91         1.12
     Length            (m)=     246.54       157.18
     Mannings n           =      0.015        0.300

     Max.Eff.Inten.(mm/hr)=     123.62        59.21
                   over (min)       5.00        35.00
     Storage Coeff.  (min)=       4.52 (ii)   30.79 (ii)
     Unit Hyd. Tpeak (min)=       5.00        35.00
     Unit Hyd. peak  (cms)=       0.23         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.67         0.35          1.834 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.42          6.00
     RUNOFF VOLUME    (mm)=      91.81        59.48         78.23
     TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
     RUNOFF COEFFICIENT   =       0.98         0.63          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50650)|
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     8.58   1.834     6.00    78.23
      + ID2= 2 (******):   187.49   6.393     6.92    74.22
        ================================================
        ID = 3 ( 50650):   196.07   6.712     6.92    74.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50650)|
 |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
 --------------------           (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50650):   196.07   6.712     6.92    74.40
      + ID2= 2 (******):    14.96   1.322     6.50    68.29
        ================================================
        ID = 1 ( 50650):   211.03   7.968     6.83    73.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60650)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        129.45        0.0450
                    6.00        129.24        0.0450
                    8.00        128.92        0.0450
                   10.00        128.26        0.0450
                   12.00        127.37        0.0450
                   14.00        126.79        0.0450
                   16.00        126.20        0.0450
                   18.00        125.80        0.0450
                   21.00        125.29        0.0450
                   24.00        124.85        0.0450
                   27.00        124.54        0.0350      Main Channel
                   30.00        124.62        0.0350      Main Channel
                   33.00        124.84    0.0350 /0.0450  Main Channel
                   36.00        125.26        0.0450
                   39.00        125.86        0.0450
                   42.00        126.49        0.0450
                   48.00        128.97        0.0450
                   54.00        129.42        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.26  124.80    .390E+03       0.9          0.76       7.18
         0.51  125.06    .124E+04       4.9          1.29       4.21
         0.77  125.31    .239E+04      12.3          1.67       3.25
         1.03  125.57    .380E+04      23.2          1.99       2.73
```

```
        1.28   125.83    .544E+04      37.9          2.27       2.40
        1.54   126.08    .731E+04      56.6          2.52       2.15
        1.80   126.34    .937E+04      79.6          2.77       1.96
        2.05   126.60    .116E+05     107.2          3.01       1.81
        2.31   126.85    .140E+05     139.3          3.25       1.67
        2.57   127.11    .165E+05     175.4          3.47       1.57
        2.82   127.37    .191E+05     215.7          3.68       1.48
        3.08   127.62    .219E+05     261.1          3.89       1.39
        3.34   127.88    .247E+05     310.7          4.10       1.32
        3.59   128.14    .276E+05     364.3          4.30       1.26
        3.85   128.40    .307E+05     421.6          4.48       1.21
        4.11   128.65    .338E+05     482.7          4.65       1.17
        4.36   128.91    .371E+05     548.1          4.82       1.13
        4.62   129.17    .406E+05     600.9          4.83       1.13
        4.88   129.42    .446E+05     634.1          4.63       1.17

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50650)  211.03     7.97    6.83  73.96      0.62      1.43
    OUTFLOW: ID= 1 ( 60650)  211.03     7.95    6.92  73.96      0.62      1.42



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.06         13.71
     Dep. Storage     (mm)=       2.00          6.10
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     581.73         82.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     123.62         82.91
                  over (min)        5.00         25.00
     Storage Coeff.  (min)=       6.51 (ii)    20.17 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.18          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=      11.72          1.55        12.657 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25         6.00
     RUNOFF VOLUME    (mm)=      91.81         51.17        80.43
     TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
     RUNOFF COEFFICIENT   =       0.98          0.55         0.86


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40670):    50.76  12.657     6.00    80.43
      + ID2= 2 ( 60650):   211.03   7.953     6.92    73.96
        ================================================
        ID = 3 ( 50670):   261.79  16.839     6.00    75.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         115.77        0.0450
                 20.00         115.51        0.0450
                 24.00         114.73        0.0450
                 28.00         113.17    0.0450 /0.0350  Main Channel
                 32.00         113.16    0.0350 /0.0450  Main Channel
                 36.00         114.68        0.0450
                 40.00         115.05        0.0450
                 44.00         115.27        0.0450
                 48.00         115.46        0.0450
                 52.00         115.71        0.0450
                 54.00         115.77        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.14   113.30    .275E+03       0.3         0.60      13.60
       0.27   113.43    .612E+03       1.2         0.93       8.76
       0.41   113.57    .996E+03       2.4         1.18       6.88
       0.55   113.71    .143E+04       4.1         1.39       5.85
       0.69   113.84    .191E+04       6.1         1.57       5.18
       0.82   113.98    .244E+04       8.6         1.73       4.70
       0.96   114.12    .301E+04      11.6         1.87       4.34
       1.10   114.26    .363E+04      14.9         2.00       4.06
       1.24   114.39    .430E+04      18.8         2.12       3.82
       1.37   114.53    .502E+04      23.1         2.24       3.63
       1.51   114.67    .579E+04      27.9         2.34       3.46
       1.65   114.81    .664E+04      32.5         2.38       3.41
       1.78   114.94    .763E+04      37.8         2.41       3.36
       1.92   115.08    .878E+04      44.0         2.44       3.33
       2.06   115.22    .101E+05      50.8         2.45       3.31
       2.20   115.35    .117E+05      58.8         2.46       3.30
       2.33   115.49    .134E+05      68.1         2.47       3.29
       2.47   115.63    .157E+05      74.2         2.30       3.53
       2.61   115.77    .188E+05      85.0         2.20       3.69

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 ( 50670)  261.79    16.84    6.00  75.22      1.17      2.06
    OUTFLOW: ID= 1 ( 60670)  261.79    15.35    6.00  75.22      1.11      2.01



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.22          4.63
     Dep. Storage     (mm)=       2.00          8.04
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     269.03         47.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     123.62         90.60
                  over (min)        5.00         15.00
     Storage Coeff.  (min)=       3.61 (ii)    13.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.25          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.03          0.72         2.658 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=      91.81         51.60        73.76
     TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
     RUNOFF COEFFICIENT   =       0.98          0.55         0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40700):    10.86   2.658     6.00    73.76
      + ID2= 2 ( 60670):   261.79  15.350     6.00    75.22
        ================================================
        ID = 3 ( 50680):   272.65  18.009     6.00    75.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50          0.69
     Dep. Storage     (mm)=       2.00          7.98
     Average Slope     (%)=       0.60          0.60
     Length            (m)=      89.27         69.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     123.62         69.22
                  over (min)        5.00         25.00
     Storage Coeff.  (min)=       2.78 (ii)    22.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.28          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.16          0.08         0.204 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25         6.00
     RUNOFF VOLUME    (mm)=      91.81         50.77        66.73
     TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
     RUNOFF COEFFICIENT   =       0.98          0.54         0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       7.93         17.56
     Dep. Storage     (mm)=       2.00          8.01
     Average Slope     (%)=       3.10          3.10
     Length            (m)=     412.26         40.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     123.62         85.88
                  over (min)        5.00         15.00
     Storage Coeff.  (min)=       4.26 (ii)    12.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.23          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.36          2.62         4.647 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=      91.81         48.83        60.65
     TOTAL RAINFALL   (mm)=      93.81         93.81        93.81
     RUNOFF COEFFICIENT   =       0.98          0.52         0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.204     6.00    66.73
      + ID2= 2 ( 40690):    25.49   4.647     6.00    60.65
        ================================================
        ID = 3 ( 50690):    26.69   4.851     6.00    60.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   272.65  18.009     6.00    75.16
      + ID2= 2 ( 50690):    26.69   4.851     6.00    60.92
        ================================================
        ID = 3 ( 50700):   299.33  22.860     6.00    73.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         109.54        0.0450
                  4.00         108.85        0.0450
                  8.00         108.76        0.0450
                 12.00         108.31        0.0450
                 16.00         107.44        0.0450
                 20.00         107.22        0.0450
                 24.00         107.06        0.0450
                 28.00         107.10        0.0450
                 32.00         107.04        0.0450
                 36.00         106.98        0.0450
                 40.00         106.83        0.0350      Main Channel
                 44.00         106.49        0.0350      Main Channel
                 48.00         106.92    0.0350 /0.0450  Main Channel
                 52.00         107.19        0.0450
                 56.00         107.11        0.0450
                 60.00         107.14        0.0450
                 64.00         107.27        0.0450
                 68.00         107.71        0.0450
                 72.00         108.37        0.0450
                 80.00         109.55        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.12   106.60    .128E+03       0.1         0.43      35.47
       0.23   106.72    .513E+03       0.4         0.69      22.34
       0.35   106.83    .115E+04       1.1         0.90      17.05
       0.52   107.00    .277E+04       3.6         1.21      12.69
       0.69   107.17    .675E+04       8.9         1.21      12.64
       0.86   107.34    .135E+05      19.9         1.35      11.35
       1.02   107.51    .211E+05      36.3         1.58       9.70
       1.19   107.68    .291E+05      57.8         1.82       8.39
       1.36   107.85    .375E+05      84.0         2.06       7.43
       1.53   108.02    .461E+05     114.5         2.28       6.71
       1.70   108.19    .550E+05     149.1         2.49       6.15
       1.87   108.35    .642E+05     187.4         2.68       5.71
       2.04   108.52    .737E+05     228.8         2.85       5.37
       2.21   108.69    .837E+05     274.1         3.01       5.09
       2.37   108.86    .942E+05     316.2         3.08       4.97
       2.54   109.03    .105E+06     372.6         3.25       4.72
       2.71   109.20    .117E+06     433.4         3.40       4.50
       2.88   109.37    .129E+06     498.6         3.55       4.31
       3.05   109.54    .141E+06     568.2         3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
```

```
                                (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50700)  299.33    22.86    6.00  73.89      0.89      1.39
   OUTFLOW: ID= 1 ( 60700)  299.33    16.94    6.17  73.89      0.81      1.31


--------------------
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n             =     0.015        0.360

     Max.Eff.Inten.(mm/hr)=     123.62        87.15
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.62 (ii)   10.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.45         0.77          1.136 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      91.81        49.27          58.10
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.53           0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40710):     6.35   1.136     6.00    58.10
     + ID2= 2 ( 60700):   299.33  16.938     6.17    73.89
       ========================================================
       ID = 3 ( 50710):   305.69  17.721     6.17    73.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n             =     0.015        0.270

     Max.Eff.Inten.(mm/hr)=     123.62        89.88
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.28 (ii)    7.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.05         0.79          7.840 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        52.45          85.38
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.56           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.1    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


--------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    0.7080      1.0040
                         0.2890      0.3890   |    0.7750      1.0700
                         0.3270      0.4500   |    0.9210      1.2580
                         0.3600      0.6030   |    1.0000      1.3280
                         0.3900      0.6540   |    1.0820      1.3980
                         0.4190      0.7110   |    1.1670      1.4690
                         0.4450      0.7680   |    1.2550      1.5390
                         0.4700      0.8260   |    1.3460      1.6090
                         0.4960      0.8830   |    1.9470      1.9930
                         0.6450      0.9400   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037      7.840      6.00      85.38
   OUTFLOW: ID= 1 ( 70150)     25.037      0.924      6.58      85.36
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.78
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.2631


  --------------------------
  | Junction Command(70151) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00


--------------------
| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n             =     0.015        0.290

     Max.Eff.Inten.(mm/hr)=     123.62        86.59
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       3.57 (ii)    7.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.61         0.65          4.258 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      91.81        50.27          81.42
     TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
     RUNOFF COEFFICIENT   =       0.98         0.54           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


--------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    0.2230      0.3310
                         0.0580      0.0840   |    0.2500      0.3590
                         0.0780      0.1040   |    0.2790      0.3870
                         0.0930      0.1240   |    0.3090      0.4160
                         0.1060      0.1440   |    0.3750      0.4780
                         0.1180      0.1640   |    0.4110      0.5120
                         0.1280      0.1840   |    0.4470      0.5450
                         0.1590      0.2550   |    0.5250      0.6130
                         0.1770      0.2790   |    0.7390      0.9130
                         0.1990      0.3030   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155      4.258      6.00      81.42
   OUTFLOW: ID= 1 ( 70160)     14.155      0.561      6.50      81.40
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.17
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6643


  --------------------------
  | Junction Command(70161) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00


--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50710):   305.69  17.721     6.17    73.56
     + ID2= 2 ( 70150):    25.04   0.924     6.58    85.36
       ========================================================
       ID = 3 ( 50730):   330.73  18.600     6.17    74.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   330.73  18.600     6.17    74.45
     + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
       ========================================================
       ID = 1 ( 50730):   330.73  18.600     6.17    74.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


--------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50730):   330.73  18.600     6.17    74.45
     + ID2= 2 ( 70160):    14.15   0.561     6.50    81.40
       ========================================================
       ID = 3 ( 50730):   344.88  19.144     6.17    74.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   344.88  19.144     6.17    74.74
     + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
       ========================================================
       ID = 1 ( 50730):   344.88  19.144     6.17    74.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.


--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          96.28         0.0450
                  9.00          95.39         0.0450
                 12.00          94.87         0.0450
                 15.00          94.17         0.0450
                 18.00          93.95         0.0450
                 21.00          94.01         0.0450
                 24.00          93.92         0.0450
                 27.00          93.98    0.0450 /0.0350  Main Channel
                 30.00          93.33         0.0350      Main Channel
                 32.00          93.73    0.0350 /0.0450  Main Channel
                 34.00          94.58         0.0450
                 35.00          95.06         0.0450
                 40.00          95.32         0.0450
                 45.00          96.12         0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
       0.13    93.46    .164E+03       0.0          0.36       89.51
       0.26    93.60    .654E+03       0.2          0.57       56.39
       0.40    93.73    .147E+04       0.6          0.75       43.03
       0.55    93.88    .274E+04       1.4          0.99       32.63
       0.70    94.03    .550E+04       2.8          1.00       32.28
       0.85    94.18    .104E+05       5.8          1.08       29.94
       1.00    94.33    .159E+05      10.1          1.24       26.04
       1.15    94.48    .216E+05      15.6          1.41       22.97
       1.29    94.63    .275E+05      22.2          1.57       20.64
       1.44    94.78    .338E+05      29.9          1.72       18.84
       1.59    94.93    .404E+05      38.6          1.86       17.44
       1.74    95.08    .473E+05      48.0          1.97       16.40
       1.89    95.23    .549E+05      58.1          2.05       15.76
       2.04    95.38    .637E+05      70.1          2.14       15.14
       2.19    95.53    .731E+05      83.0          2.21       14.67
       2.34    95.68    .833E+05      97.5          2.27       14.23
       2.49    95.83    .941E+05     113.5          2.34       13.82
       2.64    95.98    .106E+06     131.2          2.41       13.42
       2.79    96.13    .118E+06     150.7          2.48       13.05

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  344.88    19.14    6.17  74.74      1.22      1.49
   OUTFLOW: ID= 1 ( 60730)  344.88    14.10    6.50  74.74      1.10      1.36
```

```
---------------------
| CALIB             |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      56.24         13.19
     Dep. Storage     (mm)=       2.00          5.50
     Average Slope     (%)=       1.70          1.70
     Length            (m)=     680.34         43.00
     Mannings n            =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62         89.80
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       6.89 (ii)    11.08 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.18          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=      17.63          2.16         19.550 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      91.81         52.03         83.85
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.55          0.89

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)    69.429    19.550      6.00      83.85
   OUTFLOW: ID= 1 ( 70170)    69.429     2.554      6.58      83.83
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.07
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  3.7400

  --------------------------
  | Junction Command(70171) |
  --------------------------
                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00

---------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 60730):   344.88  14.104     6.50    74.74
     + ID2= 2 ( 70170):    69.43   2.554     6.58    83.83
       ================================================
       ID = 3 ( 50770):   414.31  16.641     6.50    76.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

---------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50770):   414.31  16.641     6.50    76.26
     + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
       ================================================
       ID = 1 ( 50770):   414.31  16.641     6.50    76.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

---------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         92.38         0.0450
                  3.00         90.34         0.0450
                  6.00         89.94         0.0450
                  9.00         89.83         0.0450
                 12.00         89.80         0.0450
                 15.00         89.72         0.0450
                 18.00         89.58    0.0450 /0.0350  Main Channel
                 21.00         89.15         0.0350      Main Channel
                 24.00         89.82    0.0350 /0.0450  Main Channel
                 27.00         89.76         0.0450
                 30.00         89.78         0.0450
                 33.00         89.79         0.0450
                 36.00         89.80         0.0450
                 39.00         89.72         0.0450
                 42.00         90.35         0.0450
                 45.00         91.36         0.0450
                 48.00         92.10         0.0450
                 51.00         92.21         0.0450
                 54.00         92.34         0.0450
                 56.00         92.35         0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.15    89.29    .298E+02       0.0         0.31       13.27
       0.29    89.44    .119E+03       0.2         0.50        8.36
       0.44    89.58    .268E+03       0.7         0.65        6.38
       0.61    89.76    .588E+03       1.9         0.79        5.25
       0.78    89.93    .179E+04       5.1         0.71        5.86
       0.96    90.10    .329E+04      11.4         0.87        4.79
       1.13    90.27    .489E+04      20.2         1.03        4.03
       1.30    90.45    .656E+04      31.5         1.19        3.47
       1.47    90.62    .828E+04      45.0         1.35        3.06
       1.65    90.79    .100E+05      60.5         1.50        2.76
       1.82    90.97    .118E+05      77.9         1.64        2.53
       1.99    91.14    .136E+05      97.1         1.77        2.34
       2.17    91.31    .155E+05     118.1         1.90        2.18
       2.34    91.48    .173E+05     140.6         2.02        2.06
       2.51    91.66    .193E+05     164.7         2.13        1.95
       2.68    91.83    .212E+05     190.5         2.23        1.86
       2.86    92.00    .232E+05     218.0         2.33        1.78
       3.03    92.18    .253E+05     242.7         2.39        1.74
       3.20    92.35    .275E+05     262.6         2.37        1.75

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
  INFLOW : ID= 2 ( 50770)  414.31    16.64    6.50  76.26      1.06      0.96
  OUTFLOW: ID= 1 ( 60770)  414.31    16.59    6.58  76.26      1.06      0.95

---------------------
| CALIB             |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.78         11.79
     Dep. Storage     (mm)=       2.00          8.70
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     404.74         43.00
     Mannings n            =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     123.62         79.23
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       5.24 (ii)    15.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.21          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.06          1.48          5.102 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.17          6.00
     RUNOFF VOLUME    (mm)=      91.81         48.09         69.95
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.51          0.75

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57   5.102     6.00    69.95
     + ID2= 2 ( 60770):   414.31  16.592     6.58    76.26
       ================================================
       ID = 3 ( 50780):   438.88  17.935     6.50    75.91

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

---------------------
| CALIB             |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38          2.81
     Dep. Storage     (mm)=       2.00          5.74
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     233.56         52.00
     Mannings n            =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     123.62         88.80
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       4.03 (ii)    14.60 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.24          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.74          0.43          2.111 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      91.81         52.55         77.20
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.56          0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| CALIB             |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66          0.49
     Dep. Storage     (mm)=       2.00          7.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     185.29         48.00
     Mannings n            =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     123.62         82.26
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       3.35 (ii)     7.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.26          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.58          0.09          1.674 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      91.81         48.27         87.54
     TOTAL RAINFALL   (mm)=      93.81         93.81         93.81
     RUNOFF COEFFICIENT   =       0.98          0.51          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40790):     8.18   2.111     6.00    77.20
     + ID2= 2 ( 40800):     5.15   1.674     6.00    87.54
       ================================================
       ID = 3 ( 50795):    13.33   3.785     6.00    81.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

---------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7780      0.6570
                          0.0040      0.0150   |    1.1550      0.7720
                          0.0090      0.0810   |    1.5780      0.8930
                          0.0120      0.1550   |    1.9240      0.9870
                          0.0140      0.2370   |    2.4190      1.1190
                          0.0160      0.3260   |    2.9510      1.2560
                          0.0620      0.3720   |    3.5980      1.3270
                          0.2560      0.4700   |    4.5570      1.3990
                          0.5310      0.5740   |    5.7230      1.4730

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)    13.332     3.785      6.00      81.20
   OUTFLOW: ID= 1 ( 70180)    13.332     0.747      6.33      81.12
   OVERFLOW:ID= 3 (  0003)     0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.74
                  TIME SHIFT OF PEAK FLOW          (min)= 20.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6468
```

```
   --------------------------
   | Junction Command(70181) |
   --------------------------

                            AREA     QPEAK   TPEAK     R.V.
                            (ha)     (cms)    (hrs)    (mm)
   INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
   OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

   ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40805)|   Area    (ha)=   3.57
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
 --------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.41         2.16
      Dep. Storage     (mm)=       1.00         1.50
      Average Slope     (%)=       1.00         2.00
      Length            (m)=     154.27        40.00
      Mannings n           =      0.013        0.250

      Max.Eff.Inten.(mm/hr)=     123.62       107.84
                  over (min)        5.00        10.00
      Storage Coeff.  (min)=       3.04 (ii)    9.89 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.27         0.11
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.42         0.48          0.906 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      92.81        63.76          73.84
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.99         0.68           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

   ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50790)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40805):     3.57   0.906     6.00    73.84
      + ID2= 2 ( 70180):    13.33   0.747     6.33    81.12
        ================================================
        ID = 3 ( 50790):    16.90   1.371     6.00    79.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
   ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50790)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50790):    16.90   1.371     6.00    79.59
      + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
        ================================================
        ID = 1 ( 50790):    16.90   1.371     6.00    79.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
   ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50800)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50780):   438.88  17.935     6.50    75.91
      + ID2= 2 ( 50790):    16.90   1.371     6.00    79.59
        ================================================
        ID = 3 ( 50800):   455.78  18.856     6.50    76.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
   ------------------------------------------------------------------------------

 --------------------
 | ROUTE CHN( 60800)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         88.54        0.0450
                  3.00         88.18        0.0450
                  6.00         87.54        0.0450
                  9.00         87.44        0.0450
                 12.00         87.13        0.0450
                 15.00         87.23        0.0450
                 18.00         87.18        0.0450
                 21.00         86.49    0.0450 /0.0350  Main Channel
                 24.00         85.82        0.0350      Main Channel
                 27.00         86.44    0.0350 /0.0450  Main Channel
                 30.00         87.18        0.0450
                 33.00         87.16        0.0450
                 36.00         87.25        0.0450
                 39.00         87.46        0.0450
                 42.00         87.70        0.0450
                 45.00         87.80        0.0450
                 48.00         88.00        0.0450
                 49.00         88.12        0.0450
                 50.00         88.23        0.0450
                 52.00         88.59        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12    85.95    .779E+02       0.0         0.37      48.75
        0.25    86.07    .312E+03       0.2         0.59      30.71
        0.37    86.19    .701E+03       0.5         0.77      23.44
        0.49    86.32    .125E+04       1.1         0.94      19.35
        0.62    86.44    .195E+04       1.9         1.09      16.67
        0.77    86.59    .299E+04       3.8         1.36      13.29
        0.92    86.74    .424E+04       6.2         1.59      11.42
        1.07    86.89    .570E+04       9.3         1.77      10.25
        1.22    87.04    .736E+04      13.0         1.92       9.44
        1.37    87.19    .938E+04      16.8         1.94       9.33
        1.52    87.34    .134E+05      22.9         1.86       9.74
        1.66    87.49    .182E+05      31.1         1.86       9.72
        1.81    87.64    .237E+05      41.6         1.91       9.51
        1.96    87.79    .298E+05      53.9         1.96       9.22
        2.11    87.94    .365E+05      68.9         2.05       8.84
        2.26    88.09    .437E+05      86.5         2.15       8.43
        2.41    88.24    .513E+05     106.2         2.25       8.04
        2.56    88.39    .592E+05     128.2         2.36       7.69
        2.71    88.54    .674E+05     152.5         2.46       7.36

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  455.78    18.86    6.50  76.04      1.42      1.91
   OUTFLOW: ID= 1 ( 60800)  455.78    18.15    6.67  76.04      1.40      1.92


   ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40820)|   Area    (ha)=  14.21
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
 --------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.98        11.23
      Dep. Storage     (mm)=       2.00         9.57
      Average Slope     (%)=       2.30         2.30
      Length            (m)=     307.74        44.00
      Mannings n           =      0.015        0.390

      Max.Eff.Inten.(mm/hr)=     123.62        75.22
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       3.91 (ii)   14.40 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.25         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.62         1.44          1.859 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      91.81        43.43          49.71
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.98         0.46           0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  73.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

   ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50820)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40820):    14.21   1.859     6.00    49.71
      + ID2= 2 ( 60800):   455.78  18.151     6.67    76.04
        ================================================
        ID = 3 ( 50820):   469.99  18.663     6.67    75.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
   ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  ( 50830)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50500):  1189.69  63.604     6.83    69.72
      + ID2= 2 ( 50820):   469.99  18.663     6.67    75.25
        ================================================
        ID = 3 ( 50830):  1659.67  81.874     6.83    71.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
   ------------------------------------------------------------------------------

 --------------------
 | ROUTE CHN( 60830)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.12        0.0450
                 20.00         81.53        0.0450
                 24.00         81.26        0.0450
                 28.00         81.27        0.0450
                 32.00         80.34    0.0450 /0.0350  Main Channel
                 36.00         79.95        0.0350      Main Channel
                 40.00         80.78        0.0450
                 44.00         81.45        0.0450
                 48.00         81.53        0.0450
                 52.00         81.49        0.0450
                 56.00         81.51        0.0450
                 60.00         81.58        0.0450
                 64.00         81.58        0.0450
                 68.00         81.61        0.0450
                 72.00         81.75        0.0450
                 80.00         82.07        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10    80.05    .555E+01       0.0         0.24       5.45
        0.19    80.14    .222E+02       0.1         0.38       3.43
        0.29    80.24    .499E+02       0.3         0.50       2.62
        0.39    80.34    .888E+02       0.7         0.60       2.16
        0.50    80.45    .146E+03       1.4         0.77       1.68
        0.62    80.57    .213E+03       2.5         0.91       1.43
        0.73    80.68    .290E+03       3.8         1.02       1.27
        0.85    80.80    .375E+03       5.4         1.13       1.15
        0.96    80.91    .471E+03       7.6         1.26       1.03
        1.08    81.03    .578E+03      10.1         1.37       0.95
        1.19    81.14    .695E+03      13.0         1.46       0.89
        1.31    81.26    .823E+03      16.2         1.53       0.85
        1.43    81.37    .100E+04      19.7         1.53       0.85
        1.54    81.49    .121E+04      24.1         1.56       0.84
        1.66    81.60    .155E+04      29.0         1.46       0.89
        1.77    81.72    .204E+04      36.4         1.39       0.93
        1.89    81.84    .259E+04      45.6         1.38       0.95
        2.00    81.95    .320E+04      56.7         1.38       0.94
        2.12    82.07    .387E+04      69.6         1.40       0.93

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1659.67    81.87    6.83  71.29      2.12      1.40
   OUTFLOW: ID= 1 ( 60830) 1659.67    81.83    6.83  71.29      2.11      1.40


   ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40830)|   Area    (ha)=  45.51
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
 --------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      30.36        15.15
      Dep. Storage     (mm)=       2.00         5.54
      Average Slope     (%)=       1.30         1.30
      Length            (m)=     550.83        40.00
      Mannings n           =      0.015        0.270

      Max.Eff.Inten.(mm/hr)=     123.62       130.51
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       6.58 (ii)   14.14 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.18         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       7.79         3.33         10.718 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      91.81        57.83          75.99
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.98         0.62           0.81

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

   ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40840)|   Area    (ha)=   2.04
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
 --------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       0.45         1.59
      Dep. Storage     (mm)=       2.00         9.61
      Average Slope     (%)=       3.20         3.20
      Length            (m)=     116.69        69.00
      Mannings n           =      0.015        0.370

      Max.Eff.Inten.(mm/hr)=     123.62        77.83
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       1.98 (ii)   13.87 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.31         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.10         0.22          0.286 (iii)
```

```
      TIME TO PEAK    (hrs)=       6.00         6.08          6.00
      RUNOFF VOLUME    (mm)=      91.81        44.85         51.63
      TOTAL RAINFALL   (mm)=      93.81        93.81         93.81
      RUNOFF COEFFICIENT   =       0.98         0.48          0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  75.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51  10.718     6.00    75.99
      + ID2= 2 ( 40840):     2.04   0.286     6.00    51.63
        ==================================================
        ID = 3 ( 50840):    47.56  11.004     6.00    74.94

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56  11.004     6.00    74.94
      + ID2= 2 ( 60830):  1659.67  81.834     6.83    71.29
        ==================================================
        ID = 1 ( 50840):  1707.23  83.101     6.83    71.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.18        0.0450
                 32.00         79.04        0.0450
                 40.00         78.76        0.0450
                 48.00         78.58        0.0450
                 56.00         78.21        0.0450
                 64.00         76.89        0.0350      Main Channel
                 72.00         78.08        0.0450
                 80.00         79.44        0.0450
                 88.00         80.28        0.0450
                 96.00         80.92        0.0450
                104.00         81.29        0.0450
                112.00         81.62        0.0450
                120.00         81.76        0.0450
                128.00         81.81        0.0450
                140.00         82.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)       (m/s)      (min)
        0.27   77.16    .320E+03         0.2        0.48      24.00
        0.54   77.43    .128E+04         1.4        0.75      15.12
        0.81   77.70    .288E+04         4.2        0.99      11.54
        1.08   77.97    .512E+04         9.0        1.20       9.53
        1.35   78.24    .799E+04        16.6        1.42       8.02
        1.62   78.51    .119E+05        26.9        1.54       7.40
        1.89   78.78    .176E+05        41.0        1.59       7.15
        2.16   79.05    .252E+05        62.9        1.71       6.68
        2.43   79.32    .341E+05        93.9        1.89       6.05
        2.70   79.59    .438E+05       131.1        2.05       5.56
        2.97   79.86    .544E+05       175.1        2.20       5.18
        3.24   80.13    .660E+05       226.4        2.35       4.86
        3.51   80.40    .787E+05       284.9        2.48       4.60
        3.77   80.67    .924E+05       351.1        2.60       4.39
        4.04   80.94    .107E+06       425.7        2.72       4.20
        4.31   81.21    .124E+06       507.1        2.81       4.06
        4.58   81.48    .141E+06       598.4        2.90       3.94
        4.85   81.75    .161E+06       695.9        2.96       3.86
        5.12   82.02    .185E+06       800.9        2.97       3.85

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
 INFLOW : ID= 2 ( 50840) 1707.23    83.10    6.83  71.39      2.33      1.82
 OUTFLOW: ID= 1 ( 60840) 1707.23    82.78    6.92  71.39      2.33      1.82


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--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14         18.19
     Dep. Storage     (mm)=       2.00          7.29
     Average Slope     (%)=       2.00          2.00
     Length            (m)=     418.93        142.00
     Mannings n           =      0.015         0.310

     Max.Eff.Inten.(mm/hr)=     123.62         68.88
                   over (min)       5.00         25.00
     Storage Coeff.  (min)=       4.91 (ii)    24.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.22          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.16          1.88          3.268 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.25           6.00
     RUNOFF VOLUME    (mm)=      91.81         49.12          59.63
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.52           0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  77.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33   3.268     6.00    59.63
      + ID2= 2 ( 60840):  1707.23  82.782     6.92    71.39
        ==================================================
        ID = 3 ( 50850):  1733.55  83.736     6.92    71.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77         35.37
     Dep. Storage     (mm)=       2.00          8.79
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     611.77        120.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     123.62         58.42
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       7.01 (ii)    29.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.17          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       6.04          3.18          7.638 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33           6.00
     RUNOFF VOLUME    (mm)=      91.81         49.82          64.10
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.53           0.68

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         85.55        0.0450
                 24.00         85.23        0.0450
                 28.00         85.17        0.0450
                 32.00         85.07        0.0450
                 36.00         84.96        0.0350      Main Channel
                 40.00         84.96        0.0350      Main Channel
                 44.00         85.00    0.0350 /0.0450  Main Channel
                 48.00         85.03        0.0450
                 52.00         85.18        0.0450
                 56.00         85.22        0.0450
                 60.00         85.31        0.0450
                 64.00         85.33        0.0450
                 68.00         85.38        0.0450
                 80.00         85.59        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)       (m/s)      (min)
        0.01   84.96    .992E+01         0.0        0.05     238.32
        0.04   84.99    .159E+03         0.0        0.21      57.53
        0.07   85.03    .408E+03         0.2        0.32      38.32
        0.10   85.06    .751E+03         0.4        0.40      30.54
        0.13   85.09    .114E+04         0.7        0.47      25.77
        0.16   85.12    .158E+04         1.2        0.53      22.66
        0.19   85.15    .206E+04         1.7        0.59      20.45
        0.22   85.18    .259E+04         2.3        0.64      18.91
        0.25   85.21    .321E+04         3.0        0.67      18.12
        0.29   85.24    .393E+04         3.8        0.70      17.32
        0.32   85.27    .473E+04         4.8        0.73      16.56
        0.35   85.30    .562E+04         5.9        0.76      15.89
        0.38   85.34    .663E+04         7.0        0.77      15.69
        0.41   85.37    .777E+04         8.5        0.80      15.20
        0.44   85.40    .902E+04        10.2        0.82      14.69
        0.47   85.43    .104E+05        12.2        0.85      14.19
        0.50   85.46    .118E+05        14.3        0.88      13.73
        0.53   85.49    .133E+05        16.7        0.91      13.31
        0.56   85.52    .150E+05        19.3        0.94      12.91

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
 INFLOW : ID= 2 ( 40880)   56.14     7.64    6.00  64.10      0.39      0.78
 OUTFLOW: ID= 1 ( 60880)   56.14     5.06    6.08  64.07      0.32      0.74


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--------------------
| ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height    (mm)=1900.00
| DT=  5.0 min     |     Length       (m)= 888.03
--------------------     Slope       (m/m)=  0.004
                         Manning n        =  0.013

      <----------------- TRAVEL TIME TABLE ------------------->
        DEPTH      VOLUME    FLOW RATE     VELOCITY    TRAV.TIME
          (m)      (cu.m.)      (cms)        (m/s)        min
        0.10    .213E+03         0.2         0.93        15.91
        0.20    .426E+03         0.7         1.41        10.53
        0.30    .639E+03         1.3         1.76         8.42
        0.40    .853E+03         2.0         2.04         7.25
        0.50    .107E+04         2.7         2.27         6.51
        0.60    .128E+04         3.6         2.47         5.99
        0.70    .149E+04         4.4         2.64         5.60
        0.80    .171E+04         5.4         2.79         5.30
        0.90    .192E+04         6.3         2.92         5.06
        1.00    .213E+04         7.3         3.04         4.87
        1.10    .234E+04         8.3         3.15         4.71
        1.20    .256E+04         9.3         3.24         4.57
        1.30    .277E+04        10.4         3.33         4.45
        1.40    .298E+04        11.4         3.40         4.35
        1.50    .320E+04        12.5         3.48         4.26
        1.60    .341E+04        13.6         3.54         4.18
        1.70    .362E+04        14.7         3.60         4.11
        1.80    .384E+04        15.8         3.66         4.05
        1.90    .405E+04        16.9         3.71         3.99

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
 INFLOW : ID= 2 ( 60880)   56.14     5.06    6.08  64.07      0.77      2.74
 OUTFLOW: ID= 1 ( 80880)   56.14     4.90    6.25  64.07      0.75      2.71


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--------------------
| CALIB            |
| STANDHYD ( 40890)|   Area    (ha)=  41.71
|ID= 1 DT= 5.0 min |   Total Imp(%)=  43.73   Dir. Conn.(%)=  32.85
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      18.24         23.47
     Dep. Storage     (mm)=       2.00          8.20
     Average Slope     (%)=       1.10          1.10
     Length            (m)=     527.32         85.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     123.62         74.47
                   over (min)       5.00         30.00
     Storage Coeff.  (min)=       6.74 (ii)    25.01 (ii)
     Unit Hyd. Tpeak (min)=       5.00         30.00
     Unit Hyd. peak  (cms)=       0.18          0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.37          2.53          5.661 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.33           6.00
     RUNOFF VOLUME    (mm)=      91.81         48.55          62.76
     TOTAL RAINFALL   (mm)=      93.81         93.81          93.81
     RUNOFF COEFFICIENT   =       0.98          0.52           0.67

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  75.6    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40900)|   Area    (ha)=  13.56
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  48.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.41          5.15
     Dep. Storage     (mm)=       1.00          7.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     300.67         43.00
     Mannings n           =      0.015         0.310
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```
      Max.Eff.Inten.(mm/hr)=     123.62       125.00
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       4.95 (ii)   12.62 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.22         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.16         1.13          3.164 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      92.81        55.98          73.66
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.99         0.60           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| DUHYD    ( 90020)|
| Inlet Cap.= 0.960|
| #of Inlets=     1|
| Total(cms)=   1.0|      AREA     QPEAK     TPEAK    R.V.
--------------------       (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):  13.56      3.16      6.00   73.66
      ==================================================
      MAJOR SYS.(ID= 2):   2.96      2.20      6.00   73.66
      MINOR SYS.(ID= 3):  10.60      0.96      5.75   73.66

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71   5.661     6.00    62.76
      + ID2= 2 ( 50850):  1733.55  83.736     6.92    71.21
        ==================================================
        ID = 3 ( 50890):  1775.26  85.340     6.83    71.01

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  1775.26  85.340     6.83    71.01
      + ID2= 2 ( 80880):    56.14   4.904     6.25    64.07
        ==================================================
        ID = 1 ( 50890):  1831.40  88.767     6.83    70.80

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  1831.40  88.767     6.83    70.80
      + ID2= 2 ( 90020):    10.60   0.960     5.75    73.66
        ==================================================
        ID = 3 ( 50890):  1842.01  89.109     6.83    70.82

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         79.05        0.0450
                   2.00         78.40        0.0450
                   4.00         77.75        0.0450
                   6.00         77.16        0.0450
                   8.00         76.78        0.0450
                  10.00         76.65        0.0450
                  12.00         76.60        0.0450
                  14.00         76.58        0.0450
                  16.00         76.08        0.0450
                  18.00         75.49    0.0450 /0.0350  Main Channel
                  20.00         75.46        0.0350      Main Channel
                  22.00         75.52    0.0350 /0.0450  Main Channel
                  24.00         76.15        0.0450
                  26.00         76.44        0.0450
                  28.00         76.56        0.0450
                  30.00         76.68        0.0450
                  32.00         76.86        0.0450
                  34.00         77.01        0.0450
                  36.00         77.10        0.0450
                  40.00         79.16        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.03   75.49    .127E+02       0.0          0.14      32.03
        0.22   75.68    .231E+03       0.6          0.69       6.29
        0.40   75.87    .510E+03       2.0          1.01       4.28
        0.59   76.05    .849E+03       4.1          1.25       3.45
        0.78   76.24    .125E+04       6.9          1.43       3.02
        0.97   76.43    .175E+04      10.6          1.57       2.75
        1.15   76.62    .240E+04      14.6          1.57       2.75
        1.34   76.80    .343E+04      21.1          1.60       2.71
        1.53   76.99    .465E+04      30.1          1.68       2.58
        1.71   77.18    .605E+04      41.3          1.77       2.44
        1.90   77.36    .754E+04      55.7          1.92       2.26
        2.09   77.55    .908E+04      72.1          2.06       2.10
        2.27   77.74    .107E+05      90.6          2.20       1.96
        2.46   77.92    .123E+05     111.1          2.34       1.84
        2.65   78.11    .140E+05     133.5          2.48       1.74
        2.84   78.30    .157E+05     157.9          2.61       1.66
        3.02   78.49    .175E+05     184.1          2.73       1.58
        3.21   78.67    .193E+05     212.1          2.85       1.52
        3.40   78.86    .211E+05     242.1          2.97       1.46

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 1842.01    89.11     6.83  70.82      2.26      2.19
   OUTFLOW: ID= 1 ( 60900) 1842.01    89.11     6.83  70.82      2.25      2.19

      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       4.77         2.15
      Dep. Storage     (mm)=       2.00         7.07
      Average Slope     (%)=       1.70         1.70
      Length            (m)=     214.73        44.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=     123.62       145.89
                  over (min)        5.00        15.00
      Storage Coeff.  (min)=       3.45 (ii)   10.67 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.26         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.25         0.59          1.777 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.08           6.00
      RUNOFF VOLUME    (mm)=      91.81        59.38          76.54
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.98         0.63           0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92    1.777     6.00    76.54
      + ID2= 2 ( 60900):  1842.01   89.114     6.83    70.82
        ==================================================
        ID = 3 ( 50910):  1848.92   89.278     6.83    70.84

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       5.79         0.06
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       1.70         1.00
      Length            (m)=      78.30         0.00
      Mannings n           =      0.013        0.030

      Max.Eff.Inten.(mm/hr)=     123.62        96.12
                  over (min)        5.00         5.00
      Storage Coeff.  (min)=       1.73 (ii)    1.73 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.32         0.32
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.99         0.02          2.005 (iii)
      TIME TO PEAK    (hrs)=       6.00         6.00           6.00
      RUNOFF VOLUME    (mm)=      91.81        59.48          91.48
      TOTAL RAINFALL   (mm)=      93.81        93.81          93.81
      RUNOFF COEFFICIENT   =       0.98         0.63           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85    2.005     6.00    91.48
      + ID2= 2 (******):     0.82    0.255     6.50    68.90
        ==================================================
        ID = 3 (******):     6.67    2.005     6.00    88.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.38    0.461     6.00    85.25
      + ID2= 2 (******):     6.20    1.265     6.50    68.90
        ==================================================
        ID = 3 (******):     6.58    1.265     6.50    69.84

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     6.58    1.265     6.50    69.84
      + ID2= 2 (******):     6.67    2.005     6.00    88.70
        ==================================================
        ID = 1 (******):    13.26    2.519     6.00    79.33

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        426.51        0.0450
                   0.98        426.14        0.0350      Main Channel
                   2.04        426.14        0.0350      Main Channel
                  20.51        426.51        0.0350      Main Channel

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.00   426.14    .579E+00       0.0          0.03     191.52
        0.02   426.16    .114E+02       0.0          0.14      39.52
        0.04   426.18    .285E+02       0.0          0.19      27.56
        0.06   426.20    .520E+02       0.0          0.24      22.17
        0.08   426.22    .818E+02       0.1          0.28      18.92
        0.10   426.24    .118E+03       0.1          0.32      16.68
        0.12   426.26    .161E+03       0.2          0.36      15.02
        0.14   426.27    .210E+03       0.3          0.39      13.73
        0.16   426.29    .265E+03       0.3          0.42      12.69
        0.18   426.31    .326E+03       0.5          0.45      11.82
        0.20   426.33    .394E+03       0.6          0.48      11.10
        0.22   426.35    .469E+03       0.7          0.51      10.47
        0.24   426.37    .549E+03       0.9          0.54       9.93
        0.26   426.39    .637E+03       1.1          0.56       9.46
        0.28   426.41    .730E+03       1.3          0.59       9.03
        0.30   426.43    .830E+03       1.6          0.62       8.65
        0.32   426.45    .936E+03       1.9          0.64       8.31
        0.34   426.47    .105E+04       2.2          0.67       8.01
        0.35   426.49    .117E+04       2.5          0.69       7.72

      **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   13.26     2.52     6.00  79.33      0.35      0.68
   OUTFLOW: ID= 1 (******)   13.26     2.05     6.00  79.33      0.31      0.63


--------------------------------------------------------------------------------
--------------------
| ROUTEPIPE(******)|     PIPE Number      =   1.00
| IN= 2---> OUT= 1 |     Width        (mm)=2400.00     Height    (mm)= 900.00
| DT=  5.0 min     |     Length        (m)= 372.00
--------------------     Slope       (m/m)=  0.004
                         Manning n         =  0.013

      <------------------ TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)      (cu.m.)      (cms)        (m/s)        min
        0.05     .423E+02       0.1          0.58        10.67
        0.09     .846E+02       0.2          0.90         6.89
        0.14     .127E+03       0.4          1.15         5.39
        0.19     .169E+03       0.6          1.36         4.55
        0.24     .211E+03       0.9          1.55         4.01
        0.28     .254E+03       1.2          1.71         3.63
        0.33     .296E+03       1.5          1.85         3.34
```

```
        0.38     .338E+03       1.8          1.99         3.12
        0.43     .381E+03       2.2          2.11         2.94
        0.47     .423E+03       2.5          2.22         2.80
        0.52     .465E+03       2.9          2.32         2.67
        0.57     .507E+03       3.3          2.41         2.57
        0.62     .550E+03       3.7          2.50         2.48
        0.66     .592E+03       4.1          2.58         2.40
        0.71     .634E+03       4.5          2.66         2.33
        0.76     .677E+03       5.0          2.73         2.27
        0.81     .719E+03       5.4          2.80         2.21
        0.85     .761E+03       5.9          2.86         2.17
        0.90     .804E+03       6.3          2.92         2.12
                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    3.73     0.85    6.00  85.25       0.23      1.52
   OUTFLOW: ID= 1 (******)    3.73     0.86    6.00  85.24       0.23      1.53

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   7.90   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

     Unit Hyd Qpeak  (cms)=   0.774

     PEAK FLOW       (cms)=   0.906 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  59.473
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.33   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.070

     PEAK FLOW       (cms)=   0.061 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.310
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.632

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.33   0.061     6.00    59.31
      + ID2= 2 (******):     7.90   0.906     6.25    59.47
        ================================================
        ID = 3 (******):     8.23   0.942     6.25    59.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  17.88   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

     Unit Hyd Qpeak  (cms)=   1.423

     PEAK FLOW       (cms)=   1.768 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  59.477
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.44   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.088

     PEAK FLOW       (cms)=   0.079 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  59.342
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.633

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    17.88   1.768     6.33    59.48
      + ID2= 2 (******):     0.44   0.079     6.08    59.34
        ================================================
        ID = 3 (******):    18.32   1.806     6.33    59.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.19   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.040 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  59.135
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.630

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.19   0.040     6.00    59.14
      + ID2= 2 (******):    18.32   1.806     6.33    59.47
        ================================================
        ID = 3 (******):    18.51   1.818     6.33    59.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    18.51   1.818     6.33    59.47
      + ID2= 2 (******):     8.23   0.942     6.25    59.47
        ================================================
        ID = 1 (******):    26.74   2.731     6.25    59.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    26.74   2.731     6.25    59.47
      + ID2= 2 (******):     3.73   0.857     6.00    85.24
        ================================================
        ID = 3 (******):    30.47   3.033     6.17    62.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    30.47   3.033     6.17    62.62
      + ID2= 2 (******):    13.26   2.052     6.00    79.33
        ================================================
        ID = 1 (******):    43.72   4.726     6.00    67.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        418.26        0.0450
                   40.58        417.27        0.0450
                   68.64        416.80        0.0450
                  140.74        415.56        0.0450
                  163.74        415.03    0.0450 /0.0350  Main Channel
                  211.93        413.30        0.0350      Main Channel
                  250.43        411.92        0.0350      Main Channel
                  258.86        411.77        0.0350      Main Channel
                  276.07        411.80        0.0350      Main Channel
                  290.03        411.70        0.0350      Main Channel
                  294.99        411.74        0.0350      Main Channel
                  298.74        411.97        0.0350      Main Channel
                  309.80        412.64        0.0350      Main Channel
                  321.40        413.39        0.0350      Main Channel
                  332.67        415.03    0.0350 /0.0450  Main Channel
                  344.47        416.63        0.0450
                  360.44        418.31        0.0450
                  381.73        419.43        0.0450
                  385.80        419.95        0.0450
                  389.30        420.75        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
          (m)     (m)      (cu.m.)      (cms)       (m/s)       (min)
         0.33   412.03    .115E+05      14.5         1.18       13.21
         0.67   412.36    .302E+05      61.5         1.91        8.18
         1.00   412.70    .535E+05     139.9         2.46        6.38
         1.33   413.03    .814E+05     252.5         2.91        5.37
         1.66   413.36    .114E+06     402.0         3.32        4.72
         2.00   413.70    .150E+06     597.3         3.74        4.19
         2.33   414.03    .190E+06     834.3         4.12        3.80
         2.66   414.36    .234E+06    1114.3         4.47        3.50
         2.99   414.69    .281E+06    1439.4         4.80        3.26
         3.33   415.03    .332E+06    1811.8         5.12        3.06
         3.69   415.39    .393E+06    2361.5         5.65        2.77
         4.05   415.75    .459E+06    2978.2         6.10        2.57
         4.41   416.10    .533E+06    3668.2         6.46        2.42
         4.76   416.46    .615E+06    4437.5         6.78        2.31
         5.12   416.82    .705E+06    5290.7         7.05        2.22
         5.48   417.18    .804E+06    6232.2         7.29        2.15
         5.84   417.54    .910E+06    7276.0         7.51        2.08
         6.20   417.90    .102E+07    8417.1         7.74        2.02
         6.56   418.26    .114E+07    9654.5         7.95        1.97

                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    43.72     4.73    6.00  67.69       0.11      1.18
   OUTFLOW: ID= 1 (******)    43.72     4.23    6.58  67.69       0.10      1.18

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  31.02   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   2.783 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  59.479
     TOTAL RAINFALL   (mm)=  93.808
     RUNOFF COEFFICIENT   =   0.634

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    31.02   2.783     6.42    59.48
      + ID2= 2 (******):    43.72   4.227     6.58    67.69
        ================================================
        ID = 3 (******):    74.74   6.977     6.50    64.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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 ================================================================================
 
        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
        V    V   I    SS     U   U   A A   L
         V  V    I     SS    U   U  AAAAA  L
          V V    I      SS   U   U A   A  L
           VV    I    SSSSS  UUUUU A   A  LLLLL
 
         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
        O   O    T      T    H   H   Y Y   MM MM  O   O
        O   O    T      T    H   H    Y    M M M  O   O
         OOO     T      T    H   H    Y    M   M   OOO
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                    *****  D E T A I L E D   O U T P U T *****
 
   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
 
 DATE: 02/19/2026                          TIME: 06:11:24
 
 USER:
 
 
 COMMENTS: _____________________________________________________
 
 --------------------------------------------------------------------------------
   ************************************************
   ** SIMULATION : 100yr 12hr 5min SCS Type II_C **
   ************************************************
 
 --------------------
 |    READ STORM    |    Filename: C:\Users\DPham\AppD
 |                  |              ata\Local\Temp\
 |                  |              69b74a68-4b12-4cc9-b4c1-071fbdc01431\e594bfaa
 | Ptotal=102.36 mm |    Comments: 100yr 12hr 5min SCS Type II_CC
 --------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.08	4.09	6.17	18.42	9.25	3.58
0.08	2.56	3.17	4.09	6.25	18.42	9.33	3.58
0.17	2.56	3.25	4.09	6.33	18.42	9.42	3.58
0.25	2.56	3.33	4.09	6.42	18.42	9.50	3.58
0.33	2.56	3.42	4.09	6.50	18.42	9.58	3.58
0.42	2.56	3.50	4.09	6.58	8.19	9.67	3.58
0.50	2.56	3.58	4.09	6.67	8.19	9.75	3.58
0.58	2.56	3.67	4.09	6.75	8.19	9.83	3.58
0.67	2.56	3.75	4.09	6.83	8.19	9.92	3.58
0.75	2.56	3.83	4.09	6.92	8.19	10.00	3.58
0.83	2.56	3.92	4.09	7.00	8.19	10.08	2.05
0.92	2.56	4.00	4.09	7.08	6.14	10.17	2.05
1.00	2.56	4.08	6.14	7.17	6.14	10.25	2.05
1.08	2.56	4.17	6.14	7.25	6.14	10.33	2.05
1.17	2.56	4.25	6.14	7.33	6.14	10.42	2.05
1.25	2.56	4.33	6.14	7.42	6.14	10.50	2.05
1.33	2.56	4.42	6.14	7.50	6.14	10.58	2.05
1.42	2.56	4.50	6.14	7.58	6.14	10.67	2.05
1.50	2.56	4.58	8.19	7.67	6.14	10.75	2.05
1.58	2.56	4.67	8.19	7.75	6.14	10.83	2.05
1.67	2.56	4.75	8.19	7.83	6.14	10.92	2.05
1.75	2.56	4.83	8.19	7.92	6.14	11.00	2.05
1.83	2.56	4.92	8.19	8.00	6.14	11.08	2.05
1.92	2.56	5.00	8.19	8.08	3.58	11.17	2.05
2.00	2.56	5.08	12.28	8.17	3.58	11.25	2.05
2.08	3.07	5.17	12.28	8.25	3.58	11.33	2.05
2.17	3.07	5.25	12.28	8.33	3.58	11.42	2.05
2.25	3.07	5.33	12.28	8.42	3.58	11.50	2.05
2.33	3.07	5.42	12.28	8.50	3.58	11.58	2.05
2.42	3.07	5.50	12.28	8.58	3.58	11.67	2.05
2.50	3.07	5.58	49.13	8.67	3.58	11.75	2.05
2.58	3.07	5.67	49.13	8.75	3.58	11.83	2.05
2.67	3.07	5.75	49.13	8.83	3.58	11.92	2.05
2.75	3.07	5.83	135.12	8.92	3.58	12.00	2.05
2.83	3.07	5.92	135.12	9.00	3.58		
2.92	3.07	6.00	135.12	9.08	3.58		
3.00	3.07	6.08	18.42	9.17	3.58		

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 --------------------
 | CALIB            |
 | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 79.5
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.47
 
      Unit Hyd Qpeak  (cms)=   3.502
 
      PEAK FLOW       (cms)=   4.031 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  55.354
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.541
 
      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 
 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 79.4
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.46
 
      Unit Hyd Qpeak  (cms)=   4.557
 
      PEAK FLOW       (cms)=   5.203 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  55.231
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.540
 
      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 
 --------------------------------------------------------------------------------
 --------------------
 | READ HYD (  0400)|   AREA       (ha)= 193.00
 | DT= 5.0 min      |   TPEAK     (hrs)=   6.92
 --------------------   VOLUME     (mm)=   4.39
   Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
   Comments: SPILL FROM APPLEBY TO SHELDON NORTH OF HIGHWAY 407 FOR 100-Y
```

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.000	3.25	0.000	6.50	1.141	9.75	0.000	13.00	0.000
0.08	0.000	3.33	0.000	6.58	1.409	9.83	0.000	13.08	0.000
0.17	0.000	3.42	0.000	6.67	1.640	9.92	0.000	13.17	0.000
0.25	0.000	3.50	0.000	6.75	1.828	10.00	0.000	13.25	0.000
0.33	0.000	3.58	0.000	6.83	1.951	10.08	0.000	13.33	0.000
0.42	0.000	3.67	0.000	6.92	2.008	10.17	0.000	13.42	0.000
0.50	0.000	3.75	0.000	7.00	2.005	10.25	0.000	13.50	0.000
0.58	0.000	3.83	0.000	7.08	1.950	10.33	0.000	13.58	0.000
0.67	0.000	3.92	0.000	7.17	1.852	10.42	0.000	13.67	0.000
0.75	0.000	4.00	0.000	7.25	1.722	10.50	0.000	13.75	0.000
0.83	0.000	4.08	0.000	7.33	1.567	10.58	0.000	13.83	0.000
0.92	0.000	4.17	0.000	7.42	1.396	10.67	0.000	13.92	0.000
1.00	0.000	4.25	0.000	7.50	1.219	10.75	0.000	14.00	0.000
1.08	0.000	4.33	0.000	7.58	1.047	10.83	0.000	14.08	0.000
1.17	0.000	4.42	0.000	7.67	0.889	10.92	0.000	14.17	0.000
1.25	0.000	4.50	0.000	7.75	0.742	11.00	0.000	14.25	0.000
1.33	0.000	4.58	0.000	7.83	0.609	11.08	0.000	14.33	0.000
1.42	0.000	4.67	0.000	7.92	0.486	11.17	0.000	14.42	0.000
1.50	0.000	4.75	0.000	8.00	0.383	11.25	0.000	14.50	0.000
1.58	0.000	4.83	0.000	8.08	0.293	11.33	0.000	14.58	0.000
1.67	0.000	4.92	0.000	8.17	0.219	11.42	0.000	14.67	0.000
1.75	0.000	5.00	0.000	8.25	0.160	11.50	0.000	14.75	0.000
1.83	0.000	5.08	0.000	8.33	0.112	11.58	0.000	14.83	0.000
1.92	0.000	5.17	0.000	8.42	0.068	11.67	0.000	14.92	0.000
2.00	0.000	5.25	0.000	8.50	0.037	11.75	0.000	15.00	0.000
2.08	0.000	5.33	0.000	8.58	0.019	11.83	0.000	15.08	0.000
2.17	0.000	5.42	0.000	8.67	0.008	11.92	0.000	15.17	0.000
2.25	0.000	5.50	0.000	8.75	0.003	12.00	0.000	15.25	0.000
2.33	0.000	5.58	0.000	8.83	0.001	12.08	0.000	15.33	0.000
2.42	0.000	5.67	0.000	8.92	0.000	12.17	0.000	15.42	0.000
2.50	0.000	5.75	0.000	9.00	0.000	12.25	0.000	15.50	0.000
2.58	0.000	5.83	0.000	9.08	0.000	12.33	0.000	15.58	0.000
2.67	0.000	5.92	0.000	9.17	0.000	12.42	0.000	15.67	0.000
2.75	0.000	6.00	0.000	9.25	0.000	12.50	0.000	15.75	0.000
2.83	0.000	6.08	0.000	9.33	0.000	12.58	0.000	15.83	0.000
2.92	0.000	6.17	0.009	9.42	0.000	12.67	0.000	15.92	0.000
3.00	0.000	6.25	0.184	9.50	0.000	12.75	0.000	16.00	0.000
3.08	0.000	6.33	0.472	9.58	0.000	12.83	0.000		
3.17	0.000	6.42	0.816	9.67	0.000	12.92	0.000		

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 --------------------
 | ADD HYD  ( 50010)|
 |   1 +  2 =  3    |          AREA     QPEAK     TPEAK      R.V.
 --------------------          (ha)      (cms)     (hrs)      (mm)
         ID1= 1 (  0400):   193.00    2.008     6.92      4.39
       + ID2= 2 ( 40010):    43.09    4.031     6.42     55.35
         ==========================================================
         ID = 3 ( 50010):   236.09    5.242     6.67     13.69
 
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 
 --------------------
 | ADD HYD  ( 50010)|
 |   3 +  2 =  1    |          AREA     QPEAK     TPEAK      R.V.
 --------------------          (ha)      (cms)     (hrs)      (mm)
         ID1= 3 ( 50010):   236.09    5.242     6.67     13.69
       + ID2= 2 ( 40030):    54.88    5.203     6.42     55.23
         ==========================================================
         ID = 1 ( 50010):   290.97   10.239     6.50     21.53
 
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60010)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                 <------ DATA FOR SECTION (   1.1) ------>
                 Distance      Elevation       Manning
                    0.00         160.98         0.0450
                   10.00         160.83         0.0450
                   20.00         160.72         0.0450
                   30.00         160.67         0.0450
                   40.00         160.61         0.0450
                   50.00         160.60         0.0450
                   60.00         160.55         0.0450
                   70.00         160.65         0.0450
                   80.00         159.78         0.0450
                   90.00         157.33    0.0450 /0.0350  Main Channel
                  100.00         157.18         0.0350      Main Channel
                  110.00         158.55         0.0450
                  120.00         160.34         0.0450
                  130.00         160.29         0.0450
                  140.00         160.30         0.0450
                  150.00         160.38         0.0450
                  160.00         160.53         0.0450
                  170.00         160.58         0.0450
                  180.00         160.51         0.0450
                  190.00         160.53         0.0450
 
       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV       VOLUME     FLOW RATE     VELOCITY   TRAV.TIME
         (m)       (m)      (cu.m.)       (cms)         (m/s)      (min)
        0.15    157.33    .123E+04         0.4          0.43       57.39
        0.32    157.50    .422E+04         2.5          0.88       27.82
        0.49    157.67    .768E+04         6.3          1.20       20.47
        0.66    157.83    .116E+05        11.5          1.45       16.89
        0.83    158.00    .160E+05        18.2          1.67       14.70
        0.99    158.17    .209E+05        26.5          1.86       13.18
        1.16    158.34    .263E+05        36.3          2.03       12.06
        1.33    158.51    .321E+05        47.9          2.19       11.18
        1.50    158.68    .384E+05        62.7          2.40       10.21
        1.67    158.84    .451E+05        79.9          2.60        9.41
        1.84    159.01    .522E+05        99.0          2.79        8.79
        2.00    159.18    .597E+05       120.2          2.96        8.28
        2.17    159.35    .676E+05       143.3          3.11        7.86
        2.34    159.52    .759E+05       168.5          3.26        7.51
        2.51    159.69    .846E+05       195.8          3.40        7.20
        2.68    159.86    .938E+05       224.4          3.52        6.97
        2.85    160.02    .104E+06       254.6          3.61        6.78
        3.02    160.19    .114E+06       287.5          3.70        6.62
        3.18    160.36    .127E+06       315.8          3.64        6.72
 
                                      <---- hydrograph ---->   <-pipe / channel->
                                AREA     QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)     (cms)    (hrs)   (mm)       (m)       (m/s)
    INFLOW : ID= 2 ( 50010)  290.97     10.24     6.50  21.53       0.62       1.38
    OUTFLOW: ID= 1 ( 60010)  290.97      9.06     6.75  21.53       0.58       1.32
 
 
 
 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD ( 40020)|   Area     (ha)=  51.32
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
 --------------------
                                    IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       33.87          17.45
      Dep. Storage     (mm)=        2.00           6.20
      Average Slope     (%)=        1.30           1.30
      Length            (m)=      584.91          50.00
      Mannings n             =      0.015          0.290
 
      Max.Eff.Inten.(mm/hr)=      135.12         134.70
                over (min)          5.00          20.00
      Storage Coeff.  (min)=        6.58 (ii)     15.49 (ii)
      Unit Hyd. Tpeak (min)=        5.00          20.00
      Unit Hyd. peak  (cms)=        0.18           0.07
                                                              *TOTALS*
      PEAK FLOW       (cms)=       10.05           3.63          12.713 (iii)
      TIME TO PEAK    (hrs)=        6.08           6.25           6.08
      RUNOFF VOLUME    (mm)=      100.36          64.24          84.47
      TOTAL RAINFALL   (mm)=      102.36         102.36         102.36
      RUNOFF COEFFICIENT   =        0.98           0.63           0.83
 
        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 
 --------------------------------------------------------------------------------
 
 --------------------
 | ADD HYD  ( 50020)|
 |   1 +  2 =  3    |          AREA     QPEAK     TPEAK      R.V.
 --------------------          (ha)      (cms)     (hrs)      (mm)
         ID1= 1 ( 40020):    51.32   12.713     6.08     84.47
       + ID2= 2 ( 60010):   290.97    9.063     6.75     21.53
         ==========================================================
         ID = 3 ( 50020):   342.29   14.376     6.08     30.96
 
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN( 60020)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                 <------ DATA FOR SECTION (   1.1) ------>
                 Distance      Elevation       Manning
                    0.00         153.66         0.0450
                    1.00         153.24         0.0450
```

```
                    2.00        152.95        0.0450
                    3.00        152.70        0.0450
                    4.00        152.40        0.0450
                    5.00        152.09        0.0450
                    6.00        151.83        0.0450
                    7.00        151.60        0.0450
                    8.00        151.49    0.0450 /0.0350  Main Channel
                    9.00        151.42        0.0350      Main Channel
                   10.00        151.38        0.0350      Main Channel
                   11.00        151.40        0.0350      Main Channel
                   12.00        151.38        0.0350      Main Channel
                   13.00        151.38        0.0350      Main Channel
                   14.00        151.38        0.0350      Main Channel
                   15.00        151.50    0.0350 /0.0450  Main Channel
                   16.00        151.56        0.0450
                   17.00        151.60        0.0450
                   25.00        153.59        0.0450
                   26.00        153.63        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12  151.49    .140E+03       0.2         0.36      10.54
        0.23  151.60    .355E+03       0.9         0.58       6.57
        0.34  151.72    .624E+03       2.0         0.74       5.11
        0.45  151.83    .916E+03       3.6         0.89       4.27
        0.57  151.94    .123E+04       5.5         1.02       3.73
        0.68  152.05    .157E+04       7.8         1.13       3.35
        0.79  152.17    .193E+04      10.5         1.24       3.06
        0.90  152.28    .231E+04      13.6         1.34       2.83
        1.02  152.39    .271E+04      17.1         1.43       2.65
        1.13  152.50    .314E+04      20.9         1.52       2.50
        1.24  152.62    .358E+04      25.2         1.60       2.37
        1.35  152.73    .405E+04      29.8         1.67       2.26
        1.47  152.84    .454E+04      34.9         1.75       2.17
        1.58  152.95    .505E+04      40.3         1.81       2.09
        1.69  153.07    .558E+04      46.2         1.88       2.01
        1.80  153.18    .614E+04      52.6         1.95       1.95
        1.92  153.29    .672E+04      59.4         2.01       1.88
        2.03  153.40    .731E+04      66.7         2.07       1.83
        2.14  153.52    .793E+04      74.5         2.14       1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50020)  342.29    14.38    6.08  30.96      0.93      1.36
   OUTFLOW: ID= 1 ( 60020)  342.29    13.49    6.08  30.96      0.90      1.33


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31         18.38
     Dep. Storage     (mm)=       2.00          6.00
     Average Slope     (%)=       1.20          1.20
     Length            (m)=     686.45         52.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     135.12        168.71
                  over (min)       5.00         20.00
     Storage Coeff.  (min)=       7.42 (ii)    15.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.17          0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=      14.50          4.80         18.056 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.25          6.08
     RUNOFF VOLUME    (mm)=     100.36         68.61         87.66
     TOTAL RAINFALL   (mm)=     102.36        102.36        102.36
     RUNOFF COEFFICIENT   =       0.98          0.67          0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40040):    70.68  18.056     6.08    87.66
      + ID2= 2 ( 60020):   342.29  13.491     6.08    30.96
        ================================================
        ID = 3 ( 50220):   412.97  31.547     6.08    40.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 70010)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    3.4010      4.4390
                         0.0530      0.4910   |    4.8380      5.0560
                         0.0890      0.7040   |    5.8470      5.5380
                         0.2040      1.0890   |    6.5980      5.9190
                         0.3240      1.4800   |    7.2560      6.2250
                         0.3890      1.7490   |    7.9030      6.4820
                         0.4470      1.9970   |    8.4910      6.6820
                         0.5090      2.3490   |   12.0680      7.1150
                         0.7420      2.9150   |   20.0000      7.2000
                         1.7580      3.6690   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50220)  412.973    31.547     6.08      40.67
   OUTFLOW: ID= 1 ( 70010)  412.973    14.080     6.83      40.66
   OVERFLOW:ID= 3 (  0003)    0.000     0.000     0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 44.63
                  TIME SHIFT OF PEAK FLOW         (min)= 45.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  7.1414

--------------------------------------------------------------------------------

  --------------------------
  | Junction Command(70011) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 1( 70010)  412.97    14.08    6.83    40.66
  OUTFLOW: ID= 2( 70011)  412.97    14.08    6.83    40.66

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 70012)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70010 <ID= 1> IS DRY.
*** W A R N I N G :  HYDROGRAPH  70012 = HYDROGRAPH ****
        ID1= 1 ( 70010):     0.00   0.000     0.00     0.00
      + ID2= 2 ( 70011):   412.97  14.080     6.83    40.66
        ================================================
        ID = 3 ( 70012):   412.97  14.080     6.83    40.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        148.49        0.0450
                   3.00        148.12        0.0450
                   6.00        148.07        0.0450
                   9.00        147.63        0.0450
                  12.00        147.56        0.0450
                  15.00        147.55        0.0450
                  18.00        147.46        0.0450
                  21.00        147.41        0.0450
                  24.00        147.36        0.0450
                  27.00        147.38        0.0450
                  30.00        147.22        0.0450
                  33.00        147.00        0.0450
                  36.00        146.34        0.0450
                  39.00        145.57        0.0350      Main Channel
                  42.00        145.39        0.0350      Main Channel
                  45.00        145.66        0.0350      Main Channel
                  48.00        146.68        0.0450
                  51.00        147.50        0.0450
                  55.00        148.22        0.0450
                  60.00        148.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  145.48    .145E+03       0.0         0.25      83.65
        0.18  145.57    .581E+03       0.2         0.40      52.70
        0.35  145.74    .189E+04       1.1         0.73      29.09
        0.52  145.91    .348E+04       2.7         0.99      21.52
        0.68  146.07    .532E+04       5.0         1.19      17.84
        0.85  146.24    .740E+04       7.9         1.36      15.60
        1.02  146.41    .973E+04      11.5         1.51      14.07
        1.19  146.58    .123E+05      15.9         1.64      12.94
        1.35  146.74    .152E+05      21.2         1.78      11.93
        1.52  146.91    .183E+05      27.8         1.94      10.99
        1.69  147.08    .218E+05      35.0         2.05      10.39
        1.86  147.25    .259E+05      43.0         2.12      10.03
        2.02  147.41    .309E+05      50.6         2.09      10.18
        2.19  147.58    .383E+05      61.5         2.05      10.37
        2.36  147.75    .474E+05      77.1         2.07      10.25
        2.52  147.91    .571E+05      95.6         2.14       9.95
        2.69  148.08    .672E+05     116.0         2.20       9.65
        2.86  148.25    .783E+05     138.1         2.25       9.45
        3.03  148.42    .904E+05     163.4         2.31       9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 70012)  412.97    14.08    6.83  40.66      1.12      1.59
   OUTFLOW: ID= 1 ( 60040)  412.97    12.12    7.00  40.66      1.04      1.53


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94         19.34
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       3.30          3.30
     Length            (m)=     590.36         68.00
     Mannings n           =      0.015         0.270

     Max.Eff.Inten.(mm/hr)=     135.12        151.09
                  over (min)       5.00         15.00
     Storage Coeff.  (min)=       5.01 (ii)    12.42 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       9.30          5.25         14.000 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17          6.08
     RUNOFF VOLUME    (mm)=     100.36         68.22         83.97
     TOTAL RAINFALL   (mm)=     102.36        102.36        102.36
     RUNOFF COEFFICIENT   =       0.98          0.67          0.82

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40050):    52.28  14.000     6.08    83.97
      + ID2= 2 ( 60040):   412.97  12.119     7.00    40.66
        ================================================
        ID = 3 ( 50040):   465.25  14.793     6.08    45.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        146.35        0.0450
                  16.00        145.17        0.0450
                  18.00        144.62        0.0450
                  20.00        143.50        0.0450
                  26.00        141.63        0.0350      Main Channel
                  30.00        142.17        0.0350      Main Channel
                  34.00        144.28        0.0450
                  38.00        145.27        0.0450
                  50.00        146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25  141.88    .129E+03       0.2         0.54      12.17
        0.50  142.13    .516E+03       1.1         0.86       7.67
        0.74  142.38    .111E+04       3.4         1.21       5.42
        0.99  142.63    .184E+04       7.0         1.50       4.37
        1.24  142.87    .269E+04      11.9         1.75       3.76
        1.49  143.12    .366E+04      18.2         1.96       3.36
        1.74  143.37    .476E+04      25.9         2.15       3.06
        1.98  143.62    .597E+04      35.3         2.33       2.82
        2.23  143.87    .729E+04      46.5         2.52       2.61
        2.48  144.11    .869E+04      59.3         2.69       2.44
        2.73  144.36    .102E+05      74.3         2.88       2.28
        2.97  144.61    .118E+05      92.4         3.09       2.13
        3.22  144.86    .136E+05     111.6         3.24       2.03
        3.47  145.11    .156E+05     133.1         3.37       1.95
        3.72  145.35    .178E+05     152.6         3.38       1.94
        3.97  145.60    .206E+05     175.6         3.37       1.95
        4.21  145.85    .239E+05     204.3         3.37       1.95
        4.46  146.10    .279E+05     238.6         3.38       1.95
        4.71  146.35    .324E+05     279.0         3.40       1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  465.25    14.79    6.08  45.52      1.35      1.84
   OUTFLOW: ID= 1 ( 60050)  465.25    13.53    6.08  45.52      1.30      1.79


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--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
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```
00613>               <------ DATA FOR SECTION (   1.1) ------>
00614>               Distance      Elevation       Manning
00615>                   0.00        142.52        0.0450
00616>                   2.00        142.41        0.0450
00617>                   4.00        142.26        0.0450
00618>                   6.00        142.08        0.0450
00619>                   8.00        141.85        0.0450
00620>                  10.00        141.61        0.0450
00621>                  12.00        141.38        0.0450
00622>                  14.00        141.11        0.0450
00623>                  16.00        140.93        0.0450
00624>                  18.00        140.83        0.0450
00625>                  20.00        140.73        0.0350      Main Channel
00626>                  22.00        140.55        0.0350      Main Channel
00627>                  24.00        140.49        0.0350      Main Channel
00628>                  26.00        140.65        0.0350      Main Channel
00629>                  28.00        141.04        0.0450
00630>                  30.00        141.72        0.0450
00631>                  32.00        142.19        0.0450
00632>                  40.00        142.50        0.0450
00633>
00634>      <---------------------- TRAVEL TIME TABLE ----------------------->
00635>       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00636>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
00637>        0.08   140.57    .466E+02        0.0         0.23       24.59
00638>        0.15   140.65    .155E+03        0.2         0.38       14.98
00639>        0.23   140.73    .305E+03        0.5         0.51       11.12
00640>        0.34   140.84    .598E+03        1.2         0.68        8.29
00641>        0.45   140.95    .995E+03        2.3         0.80        7.09
00642>        0.56   141.06    .147E+04        3.9         0.91        6.22
00643>        0.68   141.17    .201E+04        6.1         1.04        5.45
00644>        0.79   141.28    .259E+04        8.8         1.16        4.89
00645>        0.90   141.39    .321E+04       12.0         1.27        4.47
00646>        1.01   141.50    .389E+04       15.6         1.36        4.16
00647>        1.12   141.61    .461E+04       19.7         1.45        3.90
00648>        1.23   141.72    .537E+04       24.3         1.54        3.69
00649>        1.34   141.84    .619E+04       29.4         1.61        3.52
00650>        1.45   141.95    .707E+04       35.0         1.68        3.37
00651>        1.56   142.06    .799E+04       41.1         1.75        3.24
00652>        1.67   142.17    .898E+04       47.8         1.81        3.13
00653>        1.79   142.28    .101E+05       54.6         1.85        3.07
00654>        1.90   142.39    .113E+05       62.1         1.87        3.03
00655>        2.01   142.50    .127E+05       70.3         1.88        3.01
00656>
00657>                                    <---- hydrograph ---->   <-pipe / channel->
00658>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
00659>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
00660>    INFLOW : ID= 2 ( 50060)  465.25    13.53    6.08  45.52      0.95      1.31
00661>    OUTFLOW: ID= 1 ( 60060)  465.25    13.34    7.08  45.52      0.94      1.30
00662>
00663>
00664>
00665> --------------------------------------------------------------------------------
00666> --------------------
00667> | CALIB            |
00668> | STANDHYD ( 40060)|   Area    (ha)=   2.84
00669> |ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
00670> --------------------
00671>                              IMPERVIOUS    PERVIOUS (i)
00672>      Surface Area     (ha)=       0.94         1.90
00673>      Dep. Storage     (mm)=       2.00         7.70
00674>      Average Slope     (%)=       2.60         2.60
00675>      Length            (m)=     137.56        98.00
00676>      Mannings n           =      0.015        0.320
00677>
00678>      Max.Eff.Inten.(mm/hr)=     135.12       111.58
00679>                    over (min)       5.00        15.00
00680>      Storage Coeff.  (min)=       2.24 (ii)   14.64 (ii)
00681>      Unit Hyd. Tpeak (min)=       5.00        15.00
00682>      Unit Hyd. peak  (cms)=       0.30         0.08
00683>                                                          *TOTALS*
00684>      PEAK FLOW       (cms)=       0.28         0.37          0.601 (iii)
00685>      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
00686>      RUNOFF VOLUME    (mm)=     100.36        64.15         73.66
00687>      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
00688>      RUNOFF COEFFICIENT   =       0.98         0.63          0.72
00689>
00690> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
00691>
00692>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
00693>            CN*  =  83.2    Ia = Dep. Storage  (Above)
00694>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
00695>            THAN THE STORAGE COEFFICIENT.
00696>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00697>
00698> --------------------------------------------------------------------------------
00699>
00700> --------------------
00701> | ADD HYD  ( 50070)|
00702> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00703> --------------------         (ha)    (cms)    (hrs)     (mm)
00704>        ID1= 1 ( 40060):     2.84   0.601     6.08    73.66
00705>      + ID2= 2 ( 60060):   465.25  13.342     7.08    45.52
00706>        ================================================
00707>        ID = 3 ( 50070):   468.09  13.463     6.17    45.69
00708>
00709>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00710> --------------------------------------------------------------------------------
00711> --------------------
00712> | CALIB            |
00713> | STANDHYD ( 40080)|   Area    (ha)=  39.85
00714> |ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
00715> --------------------
00716>                              IMPERVIOUS    PERVIOUS (i)
00717>      Surface Area     (ha)=      26.30        13.55
00718>      Dep. Storage     (mm)=       2.00         5.60
00719>      Average Slope     (%)=       1.40         1.40
00720>      Length            (m)=     515.42        72.00
00721>      Mannings n           =      0.015        0.270
00722>
00723>      Max.Eff.Inten.(mm/hr)=     135.12       141.94
00724>                    over (min)       5.00        20.00
00725>      Storage Coeff.  (min)=       5.97 (ii)   16.14 (ii)
00726>      Unit Hyd. Tpeak (min)=       5.00        20.00
00727>      Unit Hyd. peak  (cms)=       0.19         0.06
00728>                                                          *TOTALS*
00729>      PEAK FLOW       (cms)=       7.65         3.05          9.899 (iii)
00730>      TIME TO PEAK    (hrs)=       6.08         6.25           6.08
00731>      RUNOFF VOLUME    (mm)=     100.36        67.82         85.39
00732>      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
00733>      RUNOFF COEFFICIENT   =       0.98         0.66          0.83
00734>
00735>
00736>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
00737>            CN*  =  81.0    Ia = Dep. Storage  (Above)
00738>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
00739>            THAN THE STORAGE COEFFICIENT.
00740>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00741>
00742> --------------------------------------------------------------------------------
00743>
00744> --------------------
00745> | ADD HYD  ( 50080)|
00746> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00747> --------------------         (ha)    (cms)    (hrs)     (mm)
00748>        ID1= 1 ( 40080):    39.85   9.899     6.08    85.39
00749>      + ID2= 2 ( 50070):   468.09  13.463     6.17    45.69
00750>        ================================================
00751>        ID = 3 ( 50080):   507.94  22.087     6.08    48.81
00752>
00753>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00754> --------------------------------------------------------------------------------
00755> --------------------
00756> | ROUTE CHN( 60080)|
00757> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00758> --------------------
00759>               <------ DATA FOR SECTION (   1.1) ------>
00760>               Distance      Elevation       Manning
00761>                   0.00        141.24        0.0450
00762>                  40.00        140.58        0.0450
00763>                  50.00        140.57        0.0450
00764>                  60.00        140.36        0.0450
00765>                  70.00        140.19        0.0450
00766>                  80.00        140.15        0.0450
00767>                  90.00        139.70        0.0450
00768>                 100.00        139.54        0.0350      Main Channel
00769>                 110.00        139.97        0.0450
00770>                 120.00        140.53        0.0450
00771>                 130.00        140.63        0.0450
00772>                 140.00        140.72        0.0450
00773>                 150.00        140.87        0.0450
00774>                 190.00        141.16        0.0450
00775>
00776>      <---------------------- TRAVEL TIME TABLE ----------------------->
00777>       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00778>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
00779>        0.09   139.63    .150E+03        0.1         0.18       43.53
00780>        0.17   139.71    .598E+03        0.4         0.30       27.01
00781>        0.26   139.80    .126E+04        1.1         0.42       19.24
00782>        0.34   139.88    .209E+04        2.2         0.52       15.58
00783>        0.43   139.97    .307E+04        3.8         0.60       13.36
00784>        0.51   140.05    .420E+04        6.1         0.70       11.45
00785>        0.60   140.14    .548E+04        9.0         0.79       10.19
00786>        0.68   140.22    .714E+04       11.3         0.76       10.55
00787>        0.77   140.31    .919E+04       15.7         0.82        9.77
00788>        0.85   140.39    .115E+05       21.0         0.88        9.11
00789>        0.94   140.48    .141E+05       27.4         0.94        8.54
00790>        1.02   140.56    .169E+05       34.6         0.99        8.12
00791>        1.11   140.65    .205E+05       41.1         0.97        8.32
00792>        1.19   140.74    .248E+05       51.5         1.00        8.02
00793>        1.28   140.82    .296E+05       64.0         1.04        7.70
00794>        1.36   140.91    .348E+05       78.0         1.08        7.44
00795>        1.45   140.99    .407E+05       93.6         1.11        7.24
00796>        1.53   141.08    .472E+05      111.7         1.14        7.05
00797>        1.62   141.16    .545E+05      132.2         1.17        6.87
00798>
00799>                                    <---- hydrograph ---->   <-pipe / channel->
00800>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
00801>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
00802>    INFLOW : ID= 2 ( 50080)  507.94    22.09    6.08  48.81      0.87      0.89
00803>    OUTFLOW: ID= 1 ( 60080)  507.94    18.04    6.25  48.81      0.80      0.85
00804>
00805>
00806>
00807> --------------------------------------------------------------------------------
00808> --------------------
00809> | CALIB            |
00810> | STANDHYD ( 40090)|   Area    (ha)=   4.45
00811> |ID= 1 DT= 5.0 min |   Total Imp(%)=  22.23   Dir. Conn.(%)=  13.77
00812> --------------------
00813>                              IMPERVIOUS    PERVIOUS (i)
00814>      Surface Area     (ha)=       0.99         3.46
00815>      Dep. Storage     (mm)=       2.00         9.68
00816>      Average Slope     (%)=       2.40         2.40
00817>      Length            (m)=     172.19        99.00
00818>      Mannings n           =      0.015        0.370
00819>
00820>      Max.Eff.Inten.(mm/hr)=     135.12        95.37
00821>                    over (min)       5.00        20.00
00822>      Storage Coeff.  (min)=       2.63 (ii)   17.47 (ii)
00823>      Unit Hyd. Tpeak (min)=       5.00        20.00
00824>      Unit Hyd. peak  (cms)=       0.29         0.06
00825>                                                          *TOTALS*
00826>      PEAK FLOW       (cms)=       0.23         0.50          0.579 (iii)
00827>      TIME TO PEAK    (hrs)=       6.08         6.25           6.08
00828>      RUNOFF VOLUME    (mm)=     100.36        54.25         60.60
00829>      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
00830>      RUNOFF COEFFICIENT   =       0.98         0.53          0.59
00831>
00832> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
00833> ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
00834>               YOU SHOULD CONSIDER SPLITTING THE AREA.
00835>
00836>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
00837>            CN*  =  77.1    Ia = Dep. Storage  (Above)
00838>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
00839>            THAN THE STORAGE COEFFICIENT.
00840>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
00841>
00842> --------------------------------------------------------------------------------
00843>
00844> --------------------
00845> | ADD HYD  ( 50090)|
00846> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
00847> --------------------         (ha)    (cms)    (hrs)     (mm)
00848>        ID1= 1 ( 40090):     4.45   0.579     6.08    60.60
00849>      + ID2= 2 ( 60080):   507.94  18.039     6.25    48.81
00850>        ================================================
00851>        ID = 3 ( 50090):   512.39  18.573     6.25    48.91
00852>
00853>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
00854> --------------------------------------------------------------------------------
00855> --------------------
00856> | ROUTE CHN( 60100)|
00857> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
00858> --------------------
00859>               <------ DATA FOR SECTION (   1.1) ------>
00860>               Distance      Elevation       Manning
00861>                   0.00        138.71        0.0450
00862>                   4.00        136.97        0.0450
00863>                  28.00        135.94        0.0450
00864>                  32.00        135.79        0.0350      Main Channel
00865>                  36.00        135.23        0.0350      Main Channel
00866>                  40.00        135.71    0.0350 /0.0450  Main Channel
00867>                  54.00        136.96        0.0450
00868>                  80.00        138.63        0.0450
00869>
00870>      <---------------------- TRAVEL TIME TABLE ----------------------->
00871>       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
00872>         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
00873>        0.16   135.39    .631E+02        0.1         0.44       12.42
00874>        0.31   135.55    .253E+03        0.5         0.69        7.83
00875>        0.47   135.71    .568E+03        1.6         0.91        5.97
00876>        0.65   135.89    .114E+04        4.2         1.20        4.52
00877>        0.84   136.07    .209E+04        8.7         1.35        4.02
00878>        1.02   136.25    .342E+04       15.4         1.47        3.70
00879>        1.20   136.44    .511E+04       24.8         1.58        3.44
00880>        1.38   136.62    .718E+04       37.2         1.69        3.21
00881>        1.57   136.80    .962E+04       53.1         1.79        3.02
00882>        1.75   136.98    .124E+05       72.7         1.90        2.85
00883>        1.93   137.17    .155E+05       97.8         2.05        2.64
00884>        2.11   137.35    .188E+05      127.1         2.20        2.47
00885>        2.30   137.53    .223E+05      160.4         2.34        2.31
00886>        2.48   137.71    .259E+05      197.8         2.48        2.19
00887>        2.66   137.90    .298E+05      239.5         2.61        2.07
00888>        2.85   138.08    .339E+05      285.4         2.74        1.98
00889>        3.03   138.26    .381E+05      335.6         2.86        1.89
00890>        3.21   138.44    .426E+05      390.3         2.98        1.82
00891>        3.39   138.63    .472E+05      449.4         3.10        1.75
00892>
00893>                                    <---- hydrograph ---->   <-pipe / channel->
00894>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
00895>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
00896>    INFLOW : ID= 2 ( 50090)  512.39    18.57    6.25  48.91      1.08      1.50
00897>    OUTFLOW: ID= 1 ( 60100)  512.39    18.20    6.25  48.91      1.07      1.50
00898>
00899>
00900>
00901> --------------------------------------------------------------------------------
00902> --------------------
00903> | CALIB            |
00904> | STANDHYD ( 40100)|   Area    (ha)=  26.90
00905> |ID= 1 DT= 5.0 min |   Total Imp(%)=  46.31   Dir. Conn.(%)=  42.42
00906> --------------------
00907>                              IMPERVIOUS    PERVIOUS (i)
00908>      Surface Area     (ha)=      12.46        14.44
00909>      Dep. Storage     (mm)=       2.00         6.20
00910>      Average Slope     (%)=       1.40         1.40
00911>      Length            (m)=     423.45       125.00
00912>      Mannings n           =      0.015        0.280
00913>
00914>      Max.Eff.Inten.(mm/hr)=     135.12        89.15
00915>                    over (min)       5.00        25.00
00916>      Storage Coeff.  (min)=       5.30 (ii)   22.74 (ii)
00917>      Unit Hyd. Tpeak (min)=       5.00        25.00
00918>      Unit Hyd. peak  (cms)=       0.21         0.05
```

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                                                        *TOTALS*
     PEAK FLOW       (cms)=       4.12         2.03          5.375 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=     100.36        64.33          79.62
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.63           0.78

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  83.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40100):    26.90   5.375     6.08    79.62
     + ID2= 2 ( 60100):   512.39  18.202     6.25    48.91
       ================================================
       ID = 3 ( 50110):   539.28  21.231     6.25    50.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD   ( 40120)|   Area    (ha)=  44.60   Curve Number   (CN)= 80.8
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.89   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.43

     Unit Hyd Qpeak  (cms)=   3.961

     PEAK FLOW       (cms)=   4.632 (i)
     TIME TO PEAK    (hrs)=   6.417
     RUNOFF VOLUME    (mm)=  57.710
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.564

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   ( 40130)|   Area    (ha)=  63.82   Curve Number   (CN)= 82.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.55   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.50

     Unit Hyd Qpeak  (cms)=   4.875

     PEAK FLOW       (cms)=   6.291 (i)
     TIME TO PEAK    (hrs)=   6.500
     RUNOFF VOLUME    (mm)=  60.756
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.594

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50130)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40120):    44.60   4.632     6.42    57.71
     + ID2= 2 ( 40130):    63.82   6.291     6.50    60.76
       ================================================
       ID = 3 ( 50130):   108.42  10.921     6.42    59.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60130)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.27        0.0450
                   2.00        155.23        0.0450
                   4.00        155.21        0.0450
                   6.00        155.08        0.0450
                   8.00        154.94        0.0450
                  10.00        154.68        0.0450
                  12.00        154.21        0.0450
                  14.00        153.90        0.0450
                  16.00        153.41        0.0350      Main Channel
                  18.00        153.58        0.0350      Main Channel
                  20.00        153.72    0.0350 /0.0450  Main Channel
                  22.00        153.77        0.0450
                  24.00        153.77        0.0450
                  26.00        153.82        0.0450
                  28.00        153.79        0.0450
                  30.00        153.87        0.0450
                  32.00        153.99        0.0450
                  34.00        154.44        0.0450
                  36.00        154.86        0.0450
                  40.00        155.37        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10  153.50    .107E+03       0.0         0.27       87.23
        0.20  153.60    .429E+03       0.1         0.42       55.65
        0.29  153.70    .991E+03       0.4         0.55       42.98
        0.39  153.80    .201E+04       0.9         0.66       35.52
        0.49  153.90    .408E+04       2.1         0.71       33.15
        0.59  153.99    .651E+04       3.7         0.81       29.01
        0.69  154.09    .916E+04       6.1         0.93       25.22
        0.79  154.19    .120E+05       8.9         1.05       22.39
        0.88  154.29    .149E+05      12.3         1.16       20.20
        0.98  154.39    .179E+05      16.2         1.27       18.49
        1.08  154.49    .211E+05      20.5         1.37       17.13
        1.18  154.58    .244E+05      25.4         1.47       16.02
        1.28  154.68    .278E+05      30.7         1.56       15.10
        1.37  154.78    .314E+05      36.4         1.63       14.38
        1.47  154.88    .351E+05      42.5         1.71       13.77
        1.57  154.98    .391E+05      48.9         1.76       13.33
        1.67  155.07    .433E+05      55.6         1.81       12.98
        1.77  155.17    .478E+05      63.0         1.86       12.65
        1.86  155.27    .528E+05      69.8         1.86       12.62

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50130)  108.42    10.92     6.42   59.50      0.84      1.11
   OUTFLOW: ID= 1 ( 60130)  108.42     8.87     6.75   59.50      0.78      1.05


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--------------------
| CALIB            |
| STANDHYD ( 40140)|   Area    (ha)=  65.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  61.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      46.69         19.07
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       1.30          1.30
     Length            (m)=     662.12         66.00
     Mannings n           =      0.015         0.290

     Max.Eff.Inten.(mm/hr)=     135.12        134.56
                   over (min)       5.00         20.00
     Storage Coeff.  (min)=       7.09 (ii)    17.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.17          0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=      13.84         3.91          16.684 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.25           6.08
     RUNOFF VOLUME    (mm)=     100.36        64.38          86.33
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.63           0.84

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50180)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40140):    65.76  16.684     6.08    86.33
     + ID2= 2 ( 60130):   108.42   8.874     6.75    59.50
       ================================================
       ID = 3 ( 50180):   174.18  18.837     6.08    69.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40180)|   Area    (ha)=  13.89
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  73.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.55         3.33
     Dep. Storage     (mm)=       2.00         6.90
     Average Slope     (%)=       1.00         1.00
     Length            (m)=     304.26        66.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=     135.12       106.72
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.81 (ii)   17.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       3.70         0.54          4.081 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.25           6.08
     RUNOFF VOLUME    (mm)=     100.36        60.51          89.60
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.59           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40190)|   Area    (ha)=  13.78
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.61   Dir. Conn.(%)=  38.64
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.74         8.05
     Dep. Storage     (mm)=       2.00         8.12
     Average Slope     (%)=       2.40         2.40
     Length            (m)=     303.13       131.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     135.12        74.52
                   over (min)       5.00        25.00
     Storage Coeff.  (min)=       3.69 (ii)   22.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.25         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.98         0.95          2.541 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=     100.36        54.81          72.41
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.54           0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60190)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        155.90        0.0450
                   1.00        154.69        0.0450
                   2.00        154.30        0.0450
                   3.00        154.00    0.0450 /0.0350  Main Channel
                   4.00        153.74        0.0350      Main Channel
                   5.00        153.51        0.0350      Main Channel
                   6.00        153.46        0.0350      Main Channel
                   7.00        153.77        0.0350      Main Channel
                   8.00        154.10    0.0350 /0.0450  Main Channel
                   9.00        154.50        0.0450
                  10.00        154.84        0.0450
                  11.00        155.13        0.0450
                  12.00        155.26        0.0450
                  13.00        155.32        0.0450
                  14.00        155.42        0.0450
                  15.00        155.52        0.0450
                  16.00        155.62        0.0450
                  17.00        155.69        0.0450
                  18.00        155.76        0.0450
                  20.00        155.88        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.11  153.57    .445E+02       0.0         0.32       21.18
        0.22  153.68    .135E+03       0.2         0.51       13.45
        0.33  153.79    .262E+03       0.4         0.66       10.46
        0.43  153.89    .423E+03       0.8         0.79        8.73
        0.54  154.00    .616E+03       1.3         0.90        7.61
        0.68  154.14    .900E+03       2.4         1.09        6.30
        0.81  154.27    .123E+04       3.8         1.27        5.40
        0.95  154.41    .160E+04       5.5         1.42        4.83
        1.08  154.54    .201E+04       7.6         1.55        4.43
        1.22  154.68    .246E+04       9.9         1.67        4.12
        1.35  154.81    .294E+04      12.7         1.78        3.86
        1.48  154.94    .345E+04      15.8         1.88        3.65
        1.62  155.08    .400E+04      19.2         1.97        3.48
        1.75  155.21    .458E+04      22.9         2.05        3.34
        1.89  155.35    .524E+04      26.8         2.11        3.26
        2.02  155.48    .599E+04      31.4         2.16        3.18
        2.16  155.62    .682E+04      36.5         2.20        3.12
        2.29  155.75    .774E+04      41.9         2.23        3.08
        2.43  155.89    .878E+04      48.0         2.25        3.05

                                   <---- hydrograph ---->   <-pipe / channel->
                             AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                             (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40190)   13.78     2.54     6.08   72.41      0.69      1.11
   OUTFLOW: ID= 1 ( 60190)   13.78     2.22     6.08   72.40      0.66      1.05


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40200)|   Area    (ha)=  22.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
--------------------
```

```
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       17.41         5.53
     Dep. Storage     (mm)=        2.00         6.75
     Average Slope     (%)=        3.00         3.00
     Length            (m)=      391.08       150.00
     Mannings n           =       0.015        0.290

     Max.Eff.Inten.(mm/hr)=      135.12        78.26
                   over (min)      5.00        25.00
     Storage Coeff.  (min)=        4.02 (ii)   20.68 (ii)
     Unit Hyd. Tpeak (min)=        5.00        25.00
     Unit Hyd. peak  (cms)=        0.24         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        6.34         0.71          6.770 (iii)
     TIME TO PEAK    (hrs)=        6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=      100.36        57.90          89.64
     TOTAL RAINFALL   (mm)=      102.36       102.36         102.36
     RUNOFF COEFFICIENT   =        0.98         0.57           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50200)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40180):    13.89   4.081     6.08    89.60
     + ID2= 2 ( 40200):    22.94   6.770     6.08    89.64
       ==================================================
       ID = 3 ( 50200):    36.83  10.850     6.08    89.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50200)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50200):    36.83  10.850     6.08    89.62
     + ID2= 2 ( 60190):    13.78   2.219     6.08    72.40
       ==================================================
       ID = 1 ( 50200):    50.61  13.070     6.08    84.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40210)|   Area    (ha)=   6.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        5.01         1.06
     Dep. Storage     (mm)=        2.00         6.27
     Average Slope     (%)=        0.90         0.90
     Length            (m)=      201.21       118.00
     Mannings n           =       0.015        0.290

     Max.Eff.Inten.(mm/hr)=      135.12        66.79
                   over (min)      5.00        30.00
     Storage Coeff.  (min)=        3.87 (ii)   25.92 (ii)
     Unit Hyd. Tpeak (min)=        5.00        30.00
     Unit Hyd. peak  (cms)=        0.25         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.84         0.12          1.900 (iii)
     TIME TO PEAK    (hrs)=        6.08         6.42           6.08
     RUNOFF VOLUME    (mm)=      100.36        57.61          92.56
     TOTAL RAINFALL   (mm)=      102.36       102.36         102.36
     RUNOFF COEFFICIENT   =        0.98         0.56           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50210)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40210):     6.07   1.900     6.08    92.56
     + ID2= 2 ( 50200):    50.61  13.070     6.08    84.93
       ==================================================
       ID = 3 ( 50210):    56.68  14.970     6.08    85.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60210)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        152.62        0.0450
                   7.00        152.39        0.0450
                   8.00        152.02        0.0450
                   9.00        151.48        0.0450
                  10.00        151.01        0.0450
                  11.00        150.56    0.0450 /0.0350  Main Channel
                  12.00        150.38        0.0350      Main Channel
                  13.00        150.40        0.0350      Main Channel
                  14.00        150.36        0.0350      Main Channel
                  15.00        150.60    0.0350 /0.0450  Main Channel
                  16.00        150.99        0.0450
                  17.00        151.50        0.0450
                  18.00        151.91        0.0450
                  19.00        152.65        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.10   150.46    .580E+02       0.1          0.30      17.06
       0.20   150.56    .160E+03       0.3          0.48      10.57
       0.32   150.68    .314E+03       0.7          0.70       7.18
       0.44   150.80    .489E+03       1.4          0.89       5.71
       0.56   150.92    .686E+03       2.3          1.03       4.89
       0.69   151.04    .904E+03       3.5          1.16       4.35
       0.81   151.16    .114E+04       4.8          1.28       3.95
       0.93   151.29    .140E+04       6.4          1.38       3.66
       1.05   151.41    .167E+04       8.1          1.48       3.42
       1.17   151.53    .196E+04      10.1          1.57       3.22
       1.29   151.65    .227E+04      12.3          1.65       3.06
       1.41   151.77    .260E+04      14.8          1.73       2.93
       1.54   151.89    .295E+04      17.5          1.80       2.81
       1.66   152.01    .331E+04      20.4          1.87       2.70
       1.78   152.13    .369E+04      23.6          1.94       2.61
       1.90   152.26    .409E+04      27.0          2.00       2.52
       2.02   152.38    .451E+04      30.7          2.06       2.45
       2.14   152.50    .500E+04      33.4          2.03       2.49
       2.26   152.62    .563E+04      37.3          2.01       2.51

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50210)    56.68    14.97    6.08  85.75       1.42      1.73
   OUTFLOW: ID= 1 ( 60210)    56.68    14.40    6.08  85.75       1.40      1.71


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40220)|   Area    (ha)=  11.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        8.91         2.40
     Dep. Storage     (mm)=        2.00         6.17
     Average Slope     (%)=        0.60         0.60
     Length            (m)=      274.66        79.00
     Mannings n           =       0.015        0.290

     Max.Eff.Inten.(mm/hr)=      135.12        78.91
                   over (min)      5.00        25.00
     Storage Coeff.  (min)=        5.27 (ii)   23.58 (ii)
     Unit Hyd. Tpeak (min)=        5.00        25.00
     Unit Hyd. peak  (cms)=        0.21         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=        3.18         0.29          3.355 (iii)
     TIME TO PEAK    (hrs)=        6.08         6.33           6.08
     RUNOFF VOLUME    (mm)=      100.36        58.53          91.06
     TOTAL RAINFALL   (mm)=      102.36       102.36         102.36
     RUNOFF COEFFICIENT   =        0.98         0.57           0.89

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40220):    11.32   3.355     6.08    91.06
     + ID2= 2 ( 60210):    56.68  14.397     6.08    85.75
       ==================================================
       ID = 3 ( 50120):    68.00  17.751     6.08    86.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50120):    68.00  17.751     6.08    86.63
     + ID2= 2 ( 50180):   174.18  18.837     6.08    69.63
       ==================================================
       ID = 3 ( 50140):   242.18  36.588     6.08    74.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        152.29        0.0450
                   2.00        152.20        0.0450
                   4.00        152.17        0.0450
                   6.00        152.15        0.0450
                   8.00        151.78        0.0450
                  10.00        151.28        0.0450
                  12.00        150.79        0.0450
                  14.00        150.20    0.0450 /0.0350  Main Channel
                  16.00        149.82        0.0350      Main Channel
                  18.00        149.51        0.0350      Main Channel
                  20.00        149.24        0.0350      Main Channel
                  22.00        149.48        0.0350      Main Channel
                  24.00        150.00    0.0350 /0.0450  Main Channel
                  26.00        150.52        0.0450
                  28.00        151.14        0.0450
                  30.00        151.68        0.0450
                  32.00        152.11        0.0450
                  34.00        152.20        0.0450
                  35.00        152.27        0.0450
                  38.00        152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.15   149.39    .694E+02       0.1          0.32      19.63
       0.31   149.54    .273E+03       0.4          0.53      11.92
       0.46   149.70    .577E+03       1.1          0.72       8.87
       0.61   149.85    .972E+03       2.2          0.87       7.30
       0.76   150.00    .145E+04       3.9          1.01       6.26
       0.93   150.16    .205E+04       6.4          1.18       5.36
       1.09   150.33    .274E+04       9.9          1.37       4.62
       1.25   150.49    .350E+04      14.2          1.54       4.11
       1.42   150.65    .434E+04      19.3          1.69       3.75
       1.58   150.82    .524E+04      25.2          1.83       3.47
       1.74   150.98    .621E+04      31.8          1.95       3.26
       1.91   151.14    .726E+04      39.2          2.06       3.09
       2.07   151.31    .839E+04      47.5          2.16       2.94
       2.23   151.47    .959E+04      56.6          2.25       2.82
       2.40   151.63    .109E+05      66.7          2.34       2.72
       2.56   151.80    .122E+05      77.6          2.41       2.63
       2.72   151.96    .137E+05      89.3          2.48       2.55
       2.89   152.12    .153E+05     102.0          2.55       2.49
       3.05   152.29    .172E+05     111.6          2.47       2.57

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)    242.18   36.59    6.08  74.40       1.85      2.02
   OUTFLOW: ID= 1 ( 60140)    242.18   34.42    6.08  74.40       1.80      1.99


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--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        151.02        0.0450
                   2.00        150.89        0.0450
                   4.00        150.73        0.0450
                   6.00        150.65        0.0450
                   8.00        150.38        0.0450
                  10.00        149.93        0.0450
                  12.00        149.51        0.0450
                  14.00        149.02    0.0450 /0.0350  Main Channel
                  16.00        148.64        0.0350      Main Channel
                  18.00        148.27        0.0350      Main Channel
                  20.00        148.39        0.0350      Main Channel
                  22.00        148.60        0.0350      Main Channel
                  24.00        148.94    0.0350 /0.0450  Main Channel
                  26.00        149.34        0.0450
                  28.00        149.66        0.0450
                  30.00        150.12        0.0450
                  32.00        150.45        0.0450
                  34.00        150.52        0.0450
                  36.00        150.60        0.0450
                  38.00        150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.11   148.38    .283E+02       0.0          0.26      13.34
       0.22   148.49    .107E+03       0.2          0.44       7.98
       0.34   148.60    .226E+03       0.6          0.58       6.07
       0.45   148.72    .380E+03       1.3          0.72       4.90
       0.56   148.83    .563E+03       2.2          0.84       4.20
       0.67   148.94    .775E+03       3.5          0.95       3.72
       0.80   149.07    .105E+04       5.5          1.11       3.17
       0.93   149.20    .136E+04       8.2          1.27       2.77
       1.06   149.32    .170E+04      11.3          1.41       2.50
       1.18   149.45    .207E+04      14.9          1.52       2.31
       1.31   149.58    .248E+04      19.1          1.63       2.17
```

```
01531>        1.44   149.71    .292E+04      23.8          1.72       2.05
01532>        1.57   149.83    .340E+04      29.1          1.81       1.95
01533>        1.70   149.96    .391E+04      34.9          1.89       1.87
01534>        1.82   150.09    .445E+04      41.4          1.97       1.79
01535>        1.95   150.22    .502E+04      48.4          2.04       1.73
01536>        2.08   150.35    .563E+04      56.0          2.10       1.67
01537>        2.21   150.47    .628E+04      63.9          2.15       1.64
01538>        2.33   150.60    .702E+04      71.1          2.14       1.64
01539>
01540>                                    <---- hydrograph ---->   <-pipe / channel->
01541>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01542>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01543>    INFLOW : ID= 2 ( 60140)  242.18    34.42    6.08  74.40      1.68      1.88
01544>    OUTFLOW: ID= 1 ( 60150)  242.18    33.02    6.17  74.40      1.65      1.86
01545>
01546>
01547>
01548> ------------------------------------------------------------------------------
01549> --------------------
01550> | CALIB            |
01551> | STANDHYD ( 40150)|   Area    (ha)=   5.37
01552> |ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
01553> --------------------
01554>                             IMPERVIOUS    PERVIOUS (i)
01555>      Surface Area     (ha)=       3.11         2.26
01556>      Dep. Storage     (mm)=       2.00         6.34
01557>      Average Slope     (%)=       2.30         2.30
01558>      Length            (m)=     189.18        45.00
01559>      Mannings n           =      0.015        0.290
01560>
01561>      Max.Eff.Inten.(mm/hr)=     135.12       113.83
01562>                  over (min)        5.00        15.00
01563>      Storage Coeff.  (min)=       2.82 (ii)   10.36 (ii)
01564>      Unit Hyd. Tpeak (min)=       5.00        15.00
01565>      Unit Hyd. peak  (cms)=       0.28         0.09
01566>                                                          *TOTALS*
01567>      PEAK FLOW       (cms)=       1.05         0.49        1.484 (iii)
01568>      TIME TO PEAK    (hrs)=       6.08         6.17         6.08
01569>      RUNOFF VOLUME    (mm)=     100.36        61.30        81.66
01570>      TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
01571>      RUNOFF COEFFICIENT   =       0.98         0.60         0.80
01572>
01573> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01574>
01575>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01576>           CN*  =  80.0    Ia = Dep. Storage  (Above)
01577>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01578>           THAN THE STORAGE COEFFICIENT.
01579>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01580>
01581> ------------------------------------------------------------------------------
01582>
01583> --------------------
01584> | ADD HYD  ( 50160)|
01585> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01586> --------------------         (ha)    (cms)    (hrs)     (mm)
01587>         ID1= 1 ( 40150):     5.37   1.484     6.08    81.66
01588>       + ID2= 2 ( 60150):   242.18  33.018     6.17    74.40
01589>         ================================================
01590>         ID = 3 ( 50160):   247.54  34.339     6.08    74.56
01591>
01592>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01593> ------------------------------------------------------------------------------
01594> --------------------
01595> | CALIB            |
01596> | STANDHYD ( 40240)|   Area    (ha)=  10.28
01597> |ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
01598> --------------------
01599>                             IMPERVIOUS    PERVIOUS (i)
01600>      Surface Area     (ha)=       8.79         1.50
01601>      Dep. Storage     (mm)=       2.00         5.70
01602>      Average Slope     (%)=       3.40         3.40
01603>      Length            (m)=     261.85        70.00
01604>      Mannings n           =      0.015        0.270
01605>
01606>      Max.Eff.Inten.(mm/hr)=     135.12       100.14
01607>                  over (min)        5.00        10.00
01608>      Storage Coeff.  (min)=       3.05 (ii)    6.91 (ii)
01609>      Unit Hyd. Tpeak (min)=       5.00        10.00
01610>      Unit Hyd. peak  (cms)=       0.27         0.14
01611>                                                          *TOTALS*
01612>      PEAK FLOW       (cms)=       3.26         0.34        3.603 (iii)
01613>      TIME TO PEAK    (hrs)=       6.08         6.08         6.08
01614>      RUNOFF VOLUME    (mm)=     100.36        58.82        94.08
01615>      TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
01616>      RUNOFF COEFFICIENT   =       0.98         0.57         0.92
01617>
01618> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01619>
01620>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01621>           CN*  =  79.6    Ia = Dep. Storage  (Above)
01622>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01623>           THAN THE STORAGE COEFFICIENT.
01624>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01625>
01626> ------------------------------------------------------------------------------
01627> --------------------
01628> | CALIB            |
01629> | STANDHYD ( 40250)|   Area    (ha)=  13.36
01630> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
01631> --------------------
01632>                             IMPERVIOUS    PERVIOUS (i)
01633>      Surface Area     (ha)=       8.61         4.75
01634>      Dep. Storage     (mm)=       2.00         7.14
01635>      Average Slope     (%)=       2.00         2.00
01636>      Length            (m)=     298.43        70.00
01637>      Mannings n           =      0.015        0.320
01638>
01639>      Max.Eff.Inten.(mm/hr)=     135.12        92.67
01640>                  over (min)        5.00        20.00
01641>      Storage Coeff.  (min)=       3.86 (ii)   15.67 (ii)
01642>      Unit Hyd. Tpeak (min)=       5.00        20.00
01643>      Unit Hyd. peak  (cms)=       0.25         0.07
01644>                                                          *TOTALS*
01645>      PEAK FLOW       (cms)=       3.11         0.70        3.612 (iii)
01646>      TIME TO PEAK    (hrs)=       6.08         6.25         6.08
01647>      RUNOFF VOLUME    (mm)=     100.36        56.52        84.09
01648>      TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
01649>      RUNOFF COEFFICIENT   =       0.98         0.55         0.82
01650>
01651> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01652>
01653>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01654>           CN*  =  78.7    Ia = Dep. Storage  (Above)
01655>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01656>           THAN THE STORAGE COEFFICIENT.
01657>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01658>
01659> ------------------------------------------------------------------------------
01660> --------------------
01661> | ROUTE CHN( 60240)|
01662> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01663> --------------------
01664>                <------ DATA FOR SECTION (   1.1) ------>
01665>                Distance      Elevation       Manning
01666>                    0.00         155.56        0.0450
01667>                    2.00         155.23        0.0450
01668>                    4.00         154.58        0.0450
01669>                    6.00         153.92        0.0450
01670>                    8.00         153.53        0.0450
01671>                   10.00         152.64        0.0450
01672>                   12.00         152.43    0.0450 /0.0350  Main Channel
01673>                   14.00         152.24        0.0350      Main Channel
01674>                   16.00         152.07        0.0350      Main Channel
01675>                   18.00         152.30    0.0350 /0.0450  Main Channel
01676>                   20.00         152.46        0.0450
01677>                   22.00         155.55        0.0450
01678>
01679>       <---------------------- TRAVEL TIME TABLE ---------------------->
01680>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01681>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01682>         0.12   152.18    .895E+02       0.1         0.43      24.33
01683>         0.24   152.30    .356E+03       0.4         0.69      15.20
01684>         0.43   152.49    .118E+04       2.1         1.10       9.55
01685>         0.62   152.68    .234E+04       5.5         1.48       7.09
01686>         0.81   152.88    .361E+04      10.4         1.83       5.76
01687>         1.00   153.07    .494E+04      16.7         2.13       4.94
01688>         1.19   153.26    .634E+04      24.2         2.40       4.38
01689>         1.38   153.45    .781E+04      32.8         2.65       3.97
01690>         1.58   153.64    .936E+04      42.5         2.86       3.67
01691>         1.77   153.83    .110E+05      53.3         3.05       3.45
01692>         1.96   154.02    .128E+05      65.6         3.23       3.26
01693>         2.15   154.21    .147E+05      79.4         3.40       3.09
01694>         2.34   154.40    .167E+05      94.5         3.57       2.95
01695>         2.53   154.60    .188E+05     111.0         3.73       2.82
01696>         2.72   154.79    .209E+05     128.7         3.89       2.71
01697>         2.91   154.98    .231E+05     147.8         4.03       2.61
01698>         3.10   155.17    .255E+05     168.3         4.17       2.52
01699>         3.30   155.36    .279E+05     189.2         4.28       2.46
01700>         3.49   155.55    .305E+05     211.3         4.38       2.40
01701>
01702>                                    <---- hydrograph ---->   <-pipe / channel->
01703>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01704>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01705>    INFLOW : ID= 2 ( 40250)   13.36     3.61    6.08  84.09      0.51      1.25
01706>    OUTFLOW: ID= 1 ( 60240)   13.36     2.99    6.08  84.08      0.48      1.18
01707>
01708>
01709>
01710> ------------------------------------------------------------------------------
01711>
01712> --------------------
01713> | ADD HYD  ( 50250)|
01714> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01715> --------------------         (ha)    (cms)    (hrs)     (mm)
01716>         ID1= 1 ( 40240):    10.28    3.603     6.08    94.08
01717>       + ID2= 2 ( 50160):   247.54   34.339     6.08    74.56
01718>         ================================================
01719>         ID = 3 ( 50250):   257.83   37.943     6.08    75.34
01720>
01721>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01722> ------------------------------------------------------------------------------
01723>
01724> --------------------
01725> | ADD HYD  ( 50250)|
01726> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
01727> --------------------         (ha)    (cms)    (hrs)     (mm)
01728>         ID1= 3 ( 50250):   257.83   37.943     6.08    75.34
01729>       + ID2= 2 ( 60240):    13.36    2.995     6.08    84.08
01730>         ================================================
01731>         ID = 1 ( 50250):   271.19   40.937     6.08    75.77
01732>
01733>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01734> ------------------------------------------------------------------------------
01735> --------------------
01736> | ROUTE CHN( 60250)|
01737> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01738> --------------------
01739>                <------ DATA FOR SECTION (   1.1) ------>
01740>                Distance      Elevation       Manning
01741>                    0.00         149.47        0.0450
01742>                    3.00         149.39        0.0450
01743>                    6.00         149.18        0.0450
01744>                    9.00         148.85        0.0450
01745>                   12.00         148.60        0.0450
01746>                   15.00         148.16        0.0450
01747>                   18.00         147.81        0.0450
01748>                   21.00         147.50        0.0450
01749>                   24.00         147.26        0.0350      Main Channel
01750>                   27.00         146.88        0.0350      Main Channel
01751>                   30.00         146.72        0.0350      Main Channel
01752>                   33.00         147.27    0.0350 /0.0450  Main Channel
01753>                   36.00         147.60        0.0450
01754>                   39.00         147.71        0.0450
01755>                   42.00         148.10        0.0450
01756>                   45.00         148.90        0.0450
01757>                   48.00         149.05        0.0450
01758>                   51.00         149.12        0.0450
01759>                   54.00         149.43        0.0450
01760>                   57.00         149.67        0.0450
01761>
01762>       <---------------------- TRAVEL TIME TABLE ---------------------->
01763>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01764>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01765>         0.14   146.85    .156E+03       0.1         0.30      40.24
01766>         0.27   146.99    .583E+03       0.4         0.51      23.51
01767>         0.41   147.13    .119E+04       1.1         0.68      17.78
01768>         0.54   147.26    .198E+04       2.2         0.82      14.76
01769>         0.69   147.41    .309E+04       4.3         1.02      11.88
01770>         0.84   147.56    .455E+04       7.2         1.15      10.50
01771>         0.98   147.70    .637E+04      10.9         1.24       9.73
01772>         1.13   147.85    .862E+04      15.8         1.32       9.12
01773>         1.28   148.00    .111E+05      21.7         1.41       8.55
01774>         1.42   148.14    .139E+05      28.7         1.50       8.06
01775>         1.57   148.29    .169E+05      37.1         1.59       7.58
01776>         1.72   148.44    .200E+05      46.5         1.68       7.16
01777>         1.87   148.58    .233E+05      57.0         1.77       6.80
01778>         2.01   148.73    .268E+05      68.3         1.85       6.53
01779>         2.16   148.88    .305E+05      80.9         1.92       6.28
01780>         2.31   149.02    .345E+05      93.2         1.95       6.17
01781>         2.45   149.17    .391E+05     106.6         1.97       6.11
01782>         2.60   149.32    .441E+05     123.2         2.02       5.97
01783>         2.75   149.47    .495E+05     139.7         2.04       5.91
01784>
01785>                                    <---- hydrograph ---->   <-pipe / channel->
01786>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01787>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01788>    INFLOW : ID= 2 ( 50250)  271.19    40.94    6.08  75.77      1.63      1.63
01789>    OUTFLOW: ID= 1 ( 60250)  271.19    34.83    6.17  75.77      1.53      1.56
01790>
01791>
01792>
01793> ------------------------------------------------------------------------------
01794> --------------------
01795> | CALIB            |
01796> | STANDHYD ( 40260)|   Area    (ha)=  28.45
01797> |ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  43.00
01798> --------------------
01799>                             IMPERVIOUS    PERVIOUS (i)
01800>      Surface Area     (ha)=      15.93        12.52
01801>      Dep. Storage     (mm)=       2.00         6.70
01802>      Average Slope     (%)=       1.30         1.30
01803>      Length            (m)=     435.49        46.00
01804>      Mannings n           =      0.015        0.300
01805>
01806>      Max.Eff.Inten.(mm/hr)=     135.12       132.59
01807>                  over (min)        5.00        15.00
01808>      Storage Coeff.  (min)=       5.52 (ii)   14.22 (ii)
01809>      Unit Hyd. Tpeak (min)=       5.00        15.00
01810>      Unit Hyd. peak  (cms)=       0.20         0.08
01811>                                                          *TOTALS*
01812>      PEAK FLOW       (cms)=       4.39         2.79        6.842 (iii)
01813>      TIME TO PEAK    (hrs)=       6.08         6.17         6.08
01814>      RUNOFF VOLUME    (mm)=     100.36        62.89        79.00
01815>      TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
01816>      RUNOFF COEFFICIENT   =       0.98         0.61         0.77
01817>
01818>
01819>       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01820>           CN*  =  78.7    Ia = Dep. Storage  (Above)
01821>      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01822>           THAN THE STORAGE COEFFICIENT.
01823>     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01824>
01825> ------------------------------------------------------------------------------
01826>
01827> --------------------
01828> | ADD HYD  ( 50260)|
01829> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01830> --------------------         (ha)    (cms)    (hrs)     (mm)
01831>         ID1= 1 ( 40260):    28.45    6.842     6.08    79.00
01832>       + ID2= 2 ( 60250):   271.19   34.829     6.17    75.77
01833>         ================================================
01834>         ID = 3 ( 50260):   299.64   39.762     6.17    76.08
01835>
01836>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

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01837> ------------------------------------------------------------------------------
01838> --------------------
01839> | ROUTE CHN( 60260)|
01840> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01841> --------------------
01842>                <------ DATA FOR SECTION (   1.1) ------>
01843>                Distance      Elevation       Manning
01844>                    0.00        143.17        0.0450
01845>                    4.00        143.15        0.0450
01846>                    8.00        143.14        0.0450
01847>                   12.00        142.95        0.0450
01848>                   16.00        142.87        0.0450
01849>                   20.00        142.67        0.0450
01850>                   24.00        142.24        0.0450
01851>                   28.00        141.84        0.0450
01852>                   32.00        141.61        0.0450
01853>                   36.00        141.32        0.0450
01854>                   40.00        140.98        0.0450
01855>                   44.00        140.88        0.0450
01856>                   48.00        139.95        0.0350      Main Channel
01857>                   52.00        140.09        0.0350      Main Channel
01858>                   56.00        141.11        0.0450
01859>                   60.00        141.43        0.0450
01860>                   76.00        143.21        0.0450
01861>
01862>       <---------- TRAVEL TIME TABLE ---------->
01863>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
01864>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
01865>         0.17  140.12    .479E+03        0.2         0.48      36.89
01866>         0.34  140.29    .147E+04        1.2         0.86      20.63
01867>         0.51  140.46    .272E+04        2.9         1.12      15.78
01868>         0.68  140.63    .421E+04        5.3         1.33      13.28
01869>         0.85  140.80    .596E+04        8.5         1.51      11.69
01870>         1.02  140.97    .812E+04       12.0         1.56      11.29
01871>         1.19  141.14    .111E+05       17.6         1.68      10.52
01872>         1.36  141.31    .147E+05       25.4         1.83       9.67
01873>         1.53  141.48    .191E+05       34.9         1.93       9.14
01874>         1.70  141.65    .242E+05       46.4         2.03       8.71
01875>         1.87  141.81    .301E+05       59.9         2.11       8.38
01876>         2.04  141.98    .367E+05       76.6         2.21       7.99
01877>         2.21  142.15    .439E+05       95.9         2.31       7.63
01878>         2.37  142.32    .517E+05      117.9         2.42       7.30
01879>         2.54  142.49    .600E+05      142.7         2.52       7.01
01880>         2.71  142.66    .689E+05      170.3         2.62       6.74
01881>         2.88  142.83    .785E+05      198.2         2.68       6.60
01882>         3.05  143.00    .892E+05      225.9         2.68       6.58
01883>         3.22  143.17    .101E+06      250.7         2.63       6.73
01884>
01885>                                    <---- hydrograph ---->   <-pipe / channel->
01886>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01887>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01888>    INFLOW : ID= 2 ( 50260)  299.64    39.76    6.17  76.08      1.60      1.97
01889>    OUTFLOW: ID= 1 ( 60260)  299.64    34.09    6.33  76.07      1.51      1.92
01890>
01891>
01892>
01893> ------------------------------------------------------------------------------
01894> --------------------
01895> | CALIB            |
01896> | STANDHYD ( 40270)|   Area    (ha)=   9.83
01897> |ID= 1 DT= 5.0 min |   Total Imp(%)=  31.77   Dir. Conn.(%)=  22.01
01898> --------------------
01899>                               IMPERVIOUS    PERVIOUS (i)
01900>      Surface Area     (ha)=       3.12         6.71
01901>      Dep. Storage     (mm)=       2.00         8.03
01902>      Average Slope     (%)=       1.10         1.10
01903>      Length            (m)=     256.01        73.00
01904>      Mannings n            =      0.015        0.330
01905>
01906>      Max.Eff.Inten.(mm/hr)=     135.12       110.24
01907>                    over (min)        5.00        20.00
01908>      Storage Coeff.  (min)=       4.22 (ii)   17.98 (ii)
01909>      Unit Hyd. Tpeak (min)=       5.00        20.00
01910>      Unit Hyd. peak  (cms)=       0.24         0.06
01911>                                                          *TOTALS*
01912>      PEAK FLOW       (cms)=       0.80         1.11          1.594 (iii)
01913>      TIME TO PEAK    (hrs)=       6.08         6.25          6.08
01914>      RUNOFF VOLUME    (mm)=     100.36        61.16         69.78
01915>      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
01916>      RUNOFF COEFFICIENT   =       0.98         0.60          0.68
01917>
01918> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
01919>
01920>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01921>              CN*  =  80.7    Ia = Dep. Storage  (Above)
01922>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01923>            THAN THE STORAGE COEFFICIENT.
01924>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01925>
01926> ------------------------------------------------------------------------------
01927>
01928> --------------------
01929> | ADD HYD  ( 50270)|
01930> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01931> --------------------         (ha)    (cms)    (hrs)     (mm)
01932>        ID1= 1 ( 40270):     9.83    1.594     6.08    69.78
01933>      + ID2= 2 ( 60260):   299.64   34.087     6.33    76.07
01934>        ==========================================================
01935>        ID = 3 ( 50270):   309.47   35.331     6.25    75.87
01936>
01937>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01938> ------------------------------------------------------------------------------
01939> --------------------
01940> | CALIB            |
01941> | STANDHYD ( 40280)|   Area    (ha)=  31.30
01942> |ID= 1 DT= 5.0 min |   Total Imp(%)=  64.40   Dir. Conn.(%)=  51.66
01943> --------------------
01944>                               IMPERVIOUS    PERVIOUS (i)
01945>      Surface Area     (ha)=      20.16        11.14
01946>      Dep. Storage     (mm)=       2.00         7.27
01947>      Average Slope     (%)=       1.10         1.10
01948>      Length            (m)=     456.83        53.00
01949>      Mannings n            =      0.015        0.310
01950>
01951>      Max.Eff.Inten.(mm/hr)=     135.12       129.83
01952>                    over (min)        5.00        20.00
01953>      Storage Coeff.  (min)=       5.97 (ii)   16.21 (ii)
01954>      Unit Hyd. Tpeak (min)=       5.00        20.00
01955>      Unit Hyd. peak  (cms)=       0.19         0.06
01956>                                                          *TOTALS*
01957>      PEAK FLOW       (cms)=       5.75         2.28          7.397 (iii)
01958>      TIME TO PEAK    (hrs)=       6.08         6.25          6.08
01959>      RUNOFF VOLUME    (mm)=     100.36        61.27         81.47
01960>      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
01961>      RUNOFF COEFFICIENT   =       0.98         0.60          0.80
01962>
01963>
01964>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01965>              CN*  =  76.8    Ia = Dep. Storage  (Above)
01966>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01967>            THAN THE STORAGE COEFFICIENT.
01968>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01969>
01970> ------------------------------------------------------------------------------
01971>
01972> --------------------
01973> | ADD HYD  ( 50280)|
01974> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01975> --------------------         (ha)    (cms)    (hrs)     (mm)
01976>        ID1= 1 ( 40280):    31.30    7.397     6.08    81.47
01977>      + ID2= 2 ( 50270):   309.47   35.331     6.25    75.87
01978>        ==========================================================
01979>        ID = 3 ( 50280):   340.77   39.356     6.25    76.39
01980>
01981>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01982> ------------------------------------------------------------------------------
01983> --------------------
01984> | ROUTE CHN( 60280)|
01985> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
01986> --------------------
01987>                <------ DATA FOR SECTION (   1.1) ------>
01988>                Distance      Elevation       Manning
01989>                    0.00        139.35        0.0450
01990>                    3.00        139.19        0.0450
01991>                    6.00        138.46        0.0450
01992>                   27.00        137.71        0.0450
01993>                   30.00        137.44        0.0350      Main Channel
01994>                   33.00        137.26        0.0350      Main Channel
01995>                   36.00        137.51        0.0350      Main Channel
01996>                   39.00        137.64    0.0350 /0.0450  Main Channel
01997>                   42.00        137.71        0.0450
01998>                   57.00        139.35        0.0450
01999>
02000>       <---------- TRAVEL TIME TABLE ---------->
02001>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
02002>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
02003>         0.09  137.35    .361E+02        0.0         0.30      17.09
02004>         0.18  137.44    .145E+03        0.2         0.48      10.76
02005>         0.30  137.55    .369E+03        0.8         0.68       7.57
02006>         0.41  137.67    .717E+03        1.9         0.82       6.28
02007>         0.52  137.78    .124E+04        3.9         0.97       5.27
02008>         0.63  137.89    .192E+04        6.8         1.10       4.67
02009>         0.74  138.00    .273E+04       10.7         1.20       4.25
02010>         0.86  138.11    .369E+04       15.7         1.30       3.93
02011>         0.97  138.23    .480E+04       21.8         1.39       3.67
02012>         1.08  138.34    .605E+04       29.1         1.48       3.46
02013>         1.19  138.45    .745E+04       37.8         1.56       3.28
02014>         1.31  138.56    .895E+04       48.6         1.67       3.07
02015>         1.42  138.68    .105E+05       60.8         1.78       2.88
02016>         1.53  138.79    .121E+05       74.4         1.89       2.71
02017>         1.64  138.90    .138E+05       89.3         1.99       2.57
02018>         1.76  139.01    .155E+05      105.5         2.10       2.44
02019>         1.87  139.13    .172E+05      123.0         2.19       2.33
02020>         1.98  139.24    .190E+05      140.8         2.27       2.25
02021>         2.09  139.35    .209E+05      159.0         2.33       2.20
02022>
02023>                                    <---- hydrograph ---->   <-pipe / channel->
02024>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
02025>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
02026>    INFLOW : ID= 2 ( 50280)  340.77    39.36    6.25  76.39      1.21      1.57
02027>    OUTFLOW: ID= 1 ( 60280)  340.77    39.00    6.33  76.39      1.21      1.57
02028>
02029>
02030>
02031> ------------------------------------------------------------------------------
02032> --------------------
02033> | CALIB            |
02034> | STANDHYD ( 40300)|   Area    (ha)=  11.53
02035> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
02036> --------------------
02037>                               IMPERVIOUS    PERVIOUS (i)
02038>      Surface Area     (ha)=       6.71         4.81
02039>      Dep. Storage     (mm)=       2.00         7.99
02040>      Average Slope     (%)=       1.60         1.60
02041>      Length            (m)=     277.19        63.00
02042>      Mannings n            =      0.015        0.340
02043>
02044>      Max.Eff.Inten.(mm/hr)=     135.12       122.81
02045>                    over (min)        5.00        15.00
02046>      Storage Coeff.  (min)=       3.95 (ii)   14.93 (ii)
02047>      Unit Hyd. Tpeak (min)=       5.00        15.00
02048>      Unit Hyd. peak  (cms)=       0.24         0.08
02049>                                                          *TOTALS*
02050>      PEAK FLOW       (cms)=       1.92         1.01          2.796 (iii)
02051>      TIME TO PEAK    (hrs)=       6.08         6.17          6.08
02052>      RUNOFF VOLUME    (mm)=     100.36        59.46         77.85
02053>      TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
02054>      RUNOFF COEFFICIENT   =       0.98         0.58          0.76
02055>
02056> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
02057>
02058>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
02059>              CN*  =  76.3    Ia = Dep. Storage  (Above)
02060>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
02061>            THAN THE STORAGE COEFFICIENT.
02062>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02063>
02064> ------------------------------------------------------------------------------
02065>
02066> --------------------
02067> | ADD HYD  ( 50300)|
02068> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02069> --------------------         (ha)    (cms)    (hrs)     (mm)
02070>        ID1= 1 ( 40300):    11.53    2.796     6.08    77.85
02071>      + ID2= 2 ( 60280):   340.77   39.001     6.33    76.39
02072>        ==========================================================
02073>        ID = 3 ( 50300):   352.30   40.071     6.33    76.44
02074>
02075>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02076> ------------------------------------------------------------------------------
02077> --------------------
02078> | ROUTE CHN( 60300)|
02079> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
02080> --------------------
02081>                <------ DATA FOR SECTION (   1.1) ------>
02082>                Distance      Elevation       Manning
02083>                    0.00        137.26        0.0450
02084>                    4.00        136.94        0.0450
02085>                    8.00        136.82        0.0450
02086>                   12.00        136.69        0.0450
02087>                   16.00        136.55        0.0450
02088>                   36.00        135.52        0.0350      Main Channel
02089>                   64.00        136.21        0.0450
02090>                   75.00        136.49        0.0450
02091>                   84.00        137.21        0.0450
02092>
02093>       <---------- TRAVEL TIME TABLE ---------->
02094>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
02095>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
02096>         0.09  135.61    .491E+02        0.1         0.26      12.99
02097>         0.18  135.70    .196E+03        0.4         0.42       8.18
02098>         0.27  135.79    .442E+03        1.2         0.55       6.24
02099>         0.36  135.88    .785E+03        2.5         0.66       5.15
02100>         0.45  135.97    .123E+04        4.6         0.77       4.44
02101>         0.53  136.06    .177E+04        7.5         0.87       3.93
02102>         0.62  136.15    .240E+04       11.3         0.96       3.55
02103>         0.71  136.24    .314E+04       16.4         1.07       3.19
02104>         0.80  136.32    .397E+04       23.3         1.20       2.84
02105>         0.89  136.41    .490E+04       31.4         1.32       2.60
02106>         0.98  136.50    .592E+04       40.8         1.42       2.41
02107>         1.07  136.59    .701E+04       51.5         1.51       2.27
02108>         1.16  136.68    .816E+04       63.4         1.59       2.14
02109>         1.25  136.77    .938E+04       76.6         1.67       2.04
02110>         1.34  136.86    .107E+05       91.2         1.75       1.95
02111>         1.42  136.95    .120E+05      107.3         1.83       1.87
02112>         1.51  137.04    .135E+05      125.8         1.91       1.78
02113>         1.60  137.13    .149E+05      145.6         2.00       1.71
02114>         1.69  137.22    .164E+05      166.8         2.08       1.64
02115>
02116>                                    <---- hydrograph ---->   <-pipe / channel->
02117>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
02118>                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
02119>    INFLOW : ID= 2 ( 50300)  352.30    40.07    6.33  76.44      0.97      1.41
02120>    OUTFLOW: ID= 1 ( 60300)  352.30    39.97    6.33  76.44      0.97      1.41
02121>
02122>
02123>
02124> ------------------------------------------------------------------------------
02125> --------------------
02126> | CALIB            |
02127> | STANDHYD ( 40290)|   Area    (ha)=   9.17
02128> |ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
02129> --------------------
02130>                               IMPERVIOUS    PERVIOUS (i)
02131>      Surface Area     (ha)=       2.77         6.39
02132>      Dep. Storage     (mm)=       2.00         8.38
02133>      Average Slope     (%)=       3.20         3.20
02134>      Length            (m)=     247.21        43.00
02135>      Mannings n            =      0.015        0.350
02136>
02137>      Max.Eff.Inten.(mm/hr)=     135.12       106.64
02138>                    over (min)        5.00        15.00
02139>      Storage Coeff.  (min)=       3.00 (ii)   10.63 (ii)
02140>      Unit Hyd. Tpeak (min)=       5.00        15.00
02141>      Unit Hyd. peak  (cms)=       0.28         0.09
02142>                                                          *TOTALS*
```

```
      PEAK FLOW       (cms)=       0.81         1.27          1.933 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
      RUNOFF VOLUME    (mm)=     100.36        58.48          68.33
      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
      RUNOFF COEFFICIENT   =       0.98         0.57           0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.8    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40290):     9.17   1.933     6.08    68.33
      + ID2= 2 ( 60300):   352.30  39.965     6.33    76.44
        ================================================
        ID = 3 ( 50340):   361.46  40.912     6.33    76.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50350)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50110):   539.28  21.231     6.25    50.44
      + ID2= 2 ( 50340):   361.46  40.912     6.33    76.23
        ================================================
        ID = 3 ( 50350):   900.75  61.737     6.33    60.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60350)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         134.05        0.0450
                 24.00         133.67        0.0450
                 30.00         131.85        0.0450
                 36.00         131.42        0.0450
                 42.00         130.48        0.0450
                 48.00         130.42        0.0350      Main Channel
                 54.00         130.42        0.0350      Main Channel
                 60.00         130.62        0.0450
                 66.00         130.77        0.0450
                 72.00         131.03        0.0450
                 78.00         131.43        0.0450
                 84.00         131.38        0.0450
                 90.00         131.33        0.0450
                 96.00         131.98        0.0450
                102.00         133.31        0.0450
                120.00         133.95        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.00   130.42    .133E+02       0.0        0.03     768.63
        0.19   130.61    .383E+04       1.6        0.61      40.07
        0.37   130.79    .994E+04       6.6        0.97      25.18
        0.56   130.98    .179E+05      15.1        1.23      19.81
        0.75   131.16    .272E+05      27.2        1.46      16.72
        0.93   131.35    .377E+05      42.2        1.64      14.88
        1.12   131.54    .521E+05      60.9        1.71      14.26
        1.30   131.72    .683E+05      87.2        1.86      13.07
        1.49   131.91    .857E+05     119.1        2.03      11.99
        1.68   132.09    .104E+06     157.8        2.22      10.96
        1.86   132.28    .122E+06     201.6        2.41      10.11
        2.05   132.47    .141E+06     250.1        2.59       9.41
        2.23   132.65    .160E+06     303.1        2.76       8.82
        2.42   132.84    .180E+06     360.6        2.93       8.32
        2.61   133.02    .200E+06     422.5        3.08       7.90
        2.79   133.21    .221E+06     488.7        3.24       7.53
        2.98   133.40    .242E+06     552.2        3.34       7.29
        3.16   133.58    .264E+06     613.6        3.40       7.17
        3.35   133.77    .288E+06     658.8        3.34       7.30

                                   <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50350)  900.75    61.74    6.33  60.79      1.12       1.71
   OUTFLOW: ID= 1 ( 60350)  900.75    53.25    6.50  60.78      1.04       1.68


--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.22   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.367 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.096
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.80   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.152 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.047
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------

                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     135.12       303.07
                  over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.10 (ii)    2.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.30
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.22         0.37          0.589 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        85.75          91.01
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.84           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.15     0.00     0.00     0.00     0.00     0.15
        0.15     1.00     0.00     0.00     0.00     1.15
        0.15   100.00     0.00     0.00     0.00   100.15

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):       1.62      0.59      6.08    91.01
     ================================================
     ID= 2  (   2)    :       1.16      0.15      6.08    91.01
     ID= 3  (   2)    :       0.46      0.44      6.08    91.01
     ID= 4  (   2)    :       0.00      0.00      0.00     0.00
     ID= 5  (   2)    :       0.00      0.00      0.00     0.00
     ID= 6  (   2)    :       0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80    0.152     6.17    67.05
      + ID2= 2 (******):     1.16    0.154     6.08    91.01
        ================================================
        ID = 3 (******):     1.96    0.294     6.08    81.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22    0.367     6.17    67.10
      + ID2= 2 (******):     1.96    0.294     6.08    81.25
        ================================================
        ID = 3 (******):     4.18    0.638     6.17    73.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                              AREA     QPEAK     TPEAK     R.V.
                              (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):       4.18      0.64      6.17    73.74
     ================================================
     ID= 2  (   2)    :       2.09      0.32      6.17    73.74
     ID= 3  (   2)    :       2.09      0.32      6.17    73.74
     ID= 4  (   2)    :       0.00      0.00      0.00     0.00
     ID= 5  (   2)    :       0.00      0.00      0.00     0.00
     ID= 6  (   2)    :       0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.03   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.186 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.073
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03    0.186     6.17    67.07
      + ID2= 2 (******):     2.09    0.319     6.17    73.74
        ================================================
        ID = 3 (******):     3.12    0.505     6.17    71.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.127 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.943
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.654

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61    0.127     6.08    66.94
      + ID2= 2 (******):     2.09    0.319     6.17    73.74
        ================================================
        ID = 3 (******):     2.70    0.445     6.17    72.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.108 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.007
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.064 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.631
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.651

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.064     6.08    66.63
      + ID2= 2 (******):     0.54   0.108     6.17    67.01
        ================================================
        ID = 3 (******):     0.80   0.167     6.08    66.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.80   0.167     6.08    66.89
      + ID2= 2 (******):     2.70   0.445     6.17    72.20
        ================================================
        ID = 1 (******):     3.50   0.607     6.17    70.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   2.16   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.368 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.090
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   1.01   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.175

     PEAK FLOW       (cms)=   0.192 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.047
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   0.29   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.17

     Unit Hyd Qpeak  (cms)=   0.065

     PEAK FLOW       (cms)=   0.063 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.895
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.654

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (******)|   Area     (ha)=   3.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
--------------------

                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         0.65
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     135.12       428.84
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.10 (ii)    2.05 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.31
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.56         0.78          1.340 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        89.88          94.18
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.88           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.37     0.00     0.00     0.00     0.00     0.37
        0.37     1.00     0.00     0.00     0.00     1.37
        0.37   100.00     0.00     0.00     0.00   100.37

                           AREA     QPEAK     TPEAK    R.V.
                            (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    3.63      1.34      6.08   94.18
     ================================================
     ID= 2  (   2)    :    2.65      0.37      6.08   94.18
     ID= 3  (   2)    :    0.98      0.97      6.08   94.18
     ID= 4  (   2)    :    0.00      0.00      0.00    0.00
     ID= 5  (   2)    :    0.00      0.00      0.00    0.00
     ID= 6  (   2)    :    0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.29   0.063     6.08    66.89
      + ID2= 2 (******):     2.65   0.373     6.08    94.18
        ================================================
        ID = 3 (******):     2.94   0.436     6.08    91.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.01   0.192     6.17    67.05
      + ID2= 2 (******):     2.94   0.436     6.08    91.48
        ================================================
        ID = 3 (******):     3.95   0.613     6.08    85.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.16   0.368     6.17    67.09
      + ID2= 2 (******):     3.95   0.613     6.08    85.23
        ================================================
        ID = 3 (******):     6.11   0.931     6.08    78.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   1.92   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.356 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.061
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| NASHYD   (******)|   Area     (ha)=   0.71   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.142 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.007
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (******)|   Area     (ha)=   8.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.21         0.08
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     135.12       110.54
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.10 (ii)    1.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.33
                                                    *TOTALS*
     PEAK FLOW       (cms)=       3.08         0.03          3.106 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        69.13         100.05
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.68           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB              |
| STANDHYD (******)|   Area     (ha)=   1.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.01
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     135.12       110.54
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.10 (ii)    1.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.33
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.44         0.00          0.446 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        69.13         100.05
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.68           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.71   0.142     6.17    67.01
      + ID2= 2 (******):     1.92   0.356     6.17    67.06
        ================================================
        ID = 3 (******):     2.63   0.498     6.17    67.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.63   0.498     6.17    67.05
      + ID2= 2 (******):     8.29   3.106     6.08   100.05
        ================================================
        ID = 1 (******):    10.92   3.564     6.08    92.10
```

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      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    10.92   3.564     6.08    92.10
      + ID2= 2 (******):     1.19   0.446     6.08   100.05
        ================================================
        ID = 3 (******):    12.11   4.010     6.08    92.88

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    12.11   4.010     6.08    92.88
      + ID2= 2 (******):     3.12   0.505     6.17    71.54
        ================================================
        ID = 1 (******):    15.23   4.479     6.08    88.51

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    15.23   4.479     6.08    88.51
      + ID2= 2 (******):     3.50   0.607     6.17    70.99
        ================================================
        ID = 3 (******):    18.73   5.076     6.08    85.23

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    18.73   5.076     6.08    85.23
      + ID2= 2 (******):     6.11   0.931     6.08    78.81
        ================================================
        ID = 1 (******):    24.84   6.007     6.08    83.65

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000  |    1.0509      1.2511
                           0.0499      0.1231  |    1.2250      1.4841
                           0.0887      0.3106  |    1.2743      1.5652
                           0.1027      0.4143  |    1.3240      1.6479
                           0.1415      0.5824  |    1.5681      1.7322
                           0.4137      0.7655  |    1.9730      1.8182
                           0.8423      1.0330  |    2.4824      1.9059

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     24.839      6.007      6.08      83.65
   OUTFLOW: ID= 1 (******)     24.839      1.011      6.67      83.63
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.82
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.2098

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  --------------------------
  | Junction Command(30361002) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30361001)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30361002)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.70   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.127

     PEAK FLOW       (cms)=   0.137 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.030
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    24.84   1.011     6.67    83.63
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 ( 50360):    24.84   1.011     6.67    83.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50360)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 ( 50360):    24.84   1.011     6.67    83.63
      + ID2= 2 (******):     0.70   0.137     6.17    67.03
        ================================================
        ID = 1 ( 50360):    25.54   1.049     6.67    83.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50360)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 50360):    25.54   1.049     6.67    83.17
      + ID2= 2 ( 60350):   900.75  53.247     6.50    60.78
        ================================================
        ID = 3 ( 50360):   926.29  54.286     6.50    61.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN( 60390)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.30        0.0450
                   6.00         127.39        0.0450
                  12.00         127.46        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04        0.0450      Main Channel
                  72.00         123.15        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   122.98    .246E+03        0.4         0.31      10.02
       0.33   123.21    .251E+04       11.8         0.86       3.57
       0.56   123.45    .538E+04       39.9         1.37       2.25
       0.80   123.68    .842E+04       81.1         1.78       1.73
       1.04   123.92    .116E+05      134.5         2.13       1.44
       1.27   124.16    .150E+05      200.0         2.46       1.25
       1.51   124.39    .185E+05      278.3         2.78       1.11
       1.74   124.63    .220E+05      367.4         3.08       1.00
       1.98   124.86    .257E+05      466.7         3.35       0.92
       2.22   125.10    .294E+05      576.1         3.61       0.85
       2.45   125.34    .332E+05      695.4         3.86       0.80
       2.69   125.57    .371E+05      824.8         4.10       0.75
       2.92   125.81    .410E+05      963.8         4.33       0.71
       3.16   126.04    .451E+05     1112.3         4.55       0.68
       3.39   126.28    .492E+05     1270.1         4.76       0.65
       3.63   126.51    .534E+05     1437.3         4.97       0.62
       3.87   126.75    .576E+05     1613.7         5.16       0.60
       4.10   126.99    .620E+05     1791.1         5.33       0.58
       4.34   127.22    .665E+05     1970.4         5.47       0.56

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50360)  926.29    54.29    6.50  61.40      0.65      1.49
   OUTFLOW: ID= 1 ( 60390)  926.29    54.20    6.50  61.40      0.65      1.49

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   ( 40390)|   Area    (ha)=  20.55   Curve Number   (CN)= 80.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   8.47   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   3.512 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  56.512
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.552

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 40390):    20.55   3.512     6.17    56.51
      + ID2= 2 ( 60390):   926.29  54.204     6.50    61.40
        ================================================
        ID = 3 ( 50390):   946.84  55.633     6.50    61.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area    (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------

                                 IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=         11.83          6.10
     Dep. Storage     (mm)=          2.00          6.08
     Average Slope     (%)=          1.50          1.50
     Length            (m)=        345.74         42.00
     Mannings n           =         0.015         0.280

     Max.Eff.Inten.(mm/hr)=        135.12        153.48
                  over (min)          5.00         15.00
     Storage Coeff.  (min)=          4.60 (ii)    11.74 (ii)
     Unit Hyd. Tpeak (min)=          5.00         15.00
     Unit Hyd. peak  (cms)=          0.23          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=          3.43          1.72          4.978 (iii)
     TIME TO PEAK    (hrs)=          6.08          6.17           6.08
     RUNOFF VOLUME    (mm)=        100.36         68.28          85.07
     TOTAL RAINFALL   (mm)=        102.36        102.36         102.36
     RUNOFF COEFFICIENT   =          0.98          0.67           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         127.70        0.0450
                  18.00         126.87        0.0450
                  24.00         125.30        0.0450
                  30.00         123.90        0.0450
                  36.00         123.14        0.0450
                  42.00         123.07        0.0450
                  48.00         122.88        0.0450
                  54.00         122.90        0.0450
                  60.00         122.95        0.0450
                  66.00         123.04    0.0450 /0.0350  Main Channel
                  72.00         122.86        0.0350      Main Channel
                  78.00         122.98        0.0450
                  84.00         122.97        0.0450
                  90.00         122.96        0.0450
                  96.00         122.92        0.0450
                 102.00         123.50        0.0450
                 108.00         124.18        0.0450
                 120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.12   122.98    .275E+03        0.7         0.35       6.78
       0.36   123.21    .218E+04       14.7         0.95       2.47
       0.59   123.45    .437E+04       44.6         1.44       1.63
       0.83   123.68    .670E+04       87.2         1.84       1.28
       1.06   123.92    .916E+04      141.6         2.19       1.08
       1.30   124.16    .117E+05      208.1         2.51       0.94
       1.54   124.39    .144E+05      287.0         2.82       0.84
       1.77   124.63    .171E+05      376.7         3.11       0.76
       2.01   124.86    .199E+05      476.5         3.38       0.70
       2.24   125.10    .228E+05      586.1         3.64       0.65
       2.48   125.33    .257E+05      705.6         3.88       0.61
       2.71   125.57    .287E+05      835.1         4.12       0.57
       2.95   125.80    .317E+05      974.0         4.35       0.54
```

```
        3.19   126.04    .348E+05    1122.3          4.56       0.52
        3.42   126.28    .379E+05    1279.8          4.77       0.49
        3.66   126.51    .411E+05    1446.6          4.97       0.47
        3.89   126.75    .444E+05    1622.6          5.17       0.46
        4.13   126.98    .477E+05    1786.6          5.29       0.45
        4.36   127.22    .513E+05    1942.9          5.36       0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     4.98    6.08  85.07      0.19      0.43
   OUTFLOW: ID= 1 ( 60370)   17.93     4.20    6.08  85.07      0.18      0.41


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--------------------
| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):   946.84  55.633     6.50    61.30
      + ID2= 2 ( 60370):    17.93   4.198     6.08    85.07
        ================================================
        ID = 3 ( 50400):   964.77  57.195     6.50    61.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        125.01        0.0450
                 20.00        123.70        0.0450
                 25.00        123.04        0.0450
                 30.00        120.84        0.0450
                 35.00        119.81    0.0450 /0.0350  Main Channel
                 40.00        119.74        0.0350      Main Channel
                 65.00        120.12        0.0450
                 90.00        120.58        0.0450
                100.00        125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.07   119.81    .209E+03       0.1         0.27       34.81
        0.35   120.09    .326E+04       4.7         0.83       11.50
        0.62   120.36    .916E+04      21.3         1.34        7.16
        0.90   120.63    .176E+05      51.5         1.68        5.69
        1.17   120.91    .270E+05      96.6         2.05        4.67
        1.44   121.18    .367E+05     153.8         2.41        3.98
        1.72   121.46    .466E+05     222.1         2.74        3.50
        1.99   121.73    .567E+05     300.7         3.05        3.14
        2.26   122.00    .669E+05     389.1         3.34        2.87
        2.54   122.28    .774E+05     487.1         3.62        2.65
        2.81   122.55    .880E+05     594.2         3.88        2.47
        3.09   122.82    .988E+05     710.4         4.13        2.32
        3.36   123.10    .110E+06     834.4         4.36        2.20
        3.63   123.37    .121E+06     964.4         4.57        2.10
        3.91   123.65    .133E+06    1104.4         4.76        2.01
        4.18   123.92    .145E+06    1250.0         4.93        1.94
        4.45   124.19    .159E+06    1406.7         5.09        1.88
        4.73   124.47    .172E+06    1575.5         5.25        1.82
        5.00   124.74    .187E+06    1756.1         5.39        1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400)  964.77    57.20    6.50  61.74      0.93      1.72
   OUTFLOW: ID= 1 ( 60400)  964.77    56.57    6.58  61.74      0.93      1.72


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--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area    (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     135.12        35.56
                  over (min)       5.00        85.00
     Storage Coeff.  (min)=       3.95 (ii)   81.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00        85.00
     Unit Hyd. peak  (cms)=       0.24         0.01
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.73         0.27        0.784 (iii)
     TIME TO PEAK    (hrs)=       6.08         7.33         6.08
     RUNOFF VOLUME    (mm)=     100.36        54.32        65.86
     TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
     RUNOFF COEFFICIENT   =       0.98         0.53         0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50410)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40410):     7.92   0.784     6.08    65.86
      + ID2= 2 ( 60400):   964.77  56.566     6.58    61.74
        ================================================
        ID = 3 ( 50410):   972.68  56.808     6.58    61.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.28   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   0.196

     PEAK FLOW       (cms)=   0.225 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.082
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.24   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.197

     PEAK FLOW       (cms)=   0.224 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.073
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.12   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.477

     PEAK FLOW       (cms)=   0.601 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  67.118
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.12   0.601     6.25    67.12
      + ID2= 2 (******):     1.24   0.224     6.17    67.07
        ================================================
        ID = 3 (******):     5.36   0.812     6.25    67.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     5.36   0.812     6.25    67.11
      + ID2= 2 (******):     1.28   0.225     6.17    67.08
        ================================================
        ID = 1 (******):     6.64   1.027     6.25    67.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40420)|   Area    (ha)=  67.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.95        46.62
     Dep. Storage     (mm)=       2.00         7.70
     Average Slope     (%)=       1.90         1.90
     Length            (m)=     671.17        89.00
     Mannings n           =      0.015        0.240

     Max.Eff.Inten.(mm/hr)=     135.12       103.69
                  over (min)       5.00        20.00
     Storage Coeff.  (min)=       6.38 (ii)   17.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       5.94         7.34        11.206 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.25         6.08
     RUNOFF VOLUME    (mm)=     100.36        60.48        70.45
     TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
     RUNOFF COEFFICIENT   =       0.98         0.59         0.69

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  81.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40420):    67.57  11.206     6.08    70.45
      + ID2= 2 (******):     6.64   1.027     6.25    67.10
        ================================================
        ID = 3 (******):    74.21  12.059     6.08    70.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50410):   972.68  56.808     6.58    61.77
      + ID2= 2 (******):    74.21  12.059     6.08    70.15
        ================================================
        ID = 3 ( 50420):  1046.89  62.580     6.50    62.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        121.79        0.0450
                 12.00        116.08        0.0450
                 40.00        115.59    0.0450 /0.0350  Main Channel
                 44.00        114.89        0.0350      Main Channel
                 48.00        114.52        0.0350      Main Channel
                 52.00        115.72    0.0350 /0.0450  Main Channel
                 56.00        115.93        0.0450
                 60.00        117.24        0.0450
                 64.00        119.04        0.0450
                 68.00        120.69        0.0450
                 72.00        121.01        0.0450
                 74.00        121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.36   114.88    .645E+03       0.7         0.83       14.38
        0.71   115.23    .236E+04       4.6         1.41        8.47
        1.07   115.59    .489E+04      12.6         1.84        6.48
        1.44   115.96    .112E+05      30.9         1.97        6.04
        1.80   116.33    .227E+05      69.1         2.17        5.49
        2.17   116.70    .351E+05     125.6         2.56        4.65
        2.54   117.06    .479E+05     197.5         2.95        4.04
        2.91   117.43    .612E+05     283.9         3.32        3.59
        3.28   117.80    .749E+05     384.1         3.66        3.25
        3.65   118.17    .891E+05     497.4         3.99        2.99
        4.02   118.54    .104E+06     623.5         4.30        2.77
        4.39   118.91    .119E+06     762.2         4.59        2.60
        4.76   119.28    .134E+06     913.1         4.87        2.45
        5.13   119.65    .150E+06    1076.2         5.13        2.32
        5.49   120.02    .166E+06    1251.7         5.38        2.21
        5.86   120.39    .183E+06    1439.5         5.62        2.12
        6.23   120.75    .200E+06    1634.3         5.84        2.04
        6.60   121.12    .219E+06    1831.3         5.99        1.99
        6.97   121.49    .238E+06    2058.5         6.20        1.92

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50420) 1046.89    62.58    6.50  62.37      1.74      2.13
   OUTFLOW: ID= 1 ( 60420) 1046.89    61.63    6.58  62.37      1.73      2.13


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
```

```
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.41        11.03
     Dep. Storage     (mm)=       2.00         7.80
     Average Slope     (%)=       3.50         3.50
     Length            (m)=     465.00       102.00
     Mannings n           =      0.015        0.320

     Max.Eff.Inten.(mm/hr)=     135.12        95.60
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       4.26 (ii)   16.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.64         1.63          8.807 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.25          6.08
     RUNOFF VOLUME    (mm)=     100.36        57.25         84.84
     TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
     RUNOFF COEFFICIENT   =       0.98         0.56          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  79.3    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40430):    32.43   8.807     6.08    84.84
      + ID2= 2 ( 60420):  1046.89  61.625     6.58    62.37
        ================================================
        ID = 3 ( 50430):  1079.33  63.599     6.58    63.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         116.29        0.0450
                 20.00         114.05        0.0450
                 25.00         110.83        0.0450
                 30.00         109.36        0.0450
                 35.00         108.23    0.0450 /0.0350  Main Channel
                 40.00         107.52        0.0350      Main Channel
                 45.00         108.00    0.0350 /0.0450  Main Channel
                 50.00         107.84        0.0450
                 55.00         108.21        0.0450
                 60.00         108.95        0.0450
                 65.00         109.35        0.0450
                 70.00         109.41        0.0450
                 75.00         109.48        0.0450
                 80.00         109.77        0.0450
                 85.00         112.20        0.0450
                 90.00         115.48        0.0450
                100.00         116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.24   107.76    .285E+03       0.4          0.74      12.74
       0.48   108.00    .146E+04       2.6          1.01       9.32
       0.97   108.49    .695E+04      23.3          1.90       4.97
       1.46   108.97    .141E+05      64.5          2.60       3.63
       1.94   109.46    .233E+05     116.9          2.84       3.33
       2.43   109.95    .371E+05     214.6          3.28       2.88
       2.92   110.44    .519E+05     350.2          3.83       2.47
       3.41   110.92    .675E+05     515.9          4.34       2.18
       3.89   111.41    .836E+05     711.3          4.82       1.96
       4.38   111.90    .100E+06     933.4          5.28       1.79
       4.87   112.39    .117E+06    1182.4          5.71       1.65
       5.35   112.87    .135E+06    1458.0          6.13       1.54
       5.84   113.36    .153E+06    1758.3          6.52       1.45
       6.33   113.85    .171E+06    2082.9          6.90       1.37
       6.82   114.34    .190E+06    2410.6          7.19       1.31
       7.30   114.82    .210E+06    2758.9          7.43       1.27
       7.79   115.31    .232E+06    3143.1          7.68       1.23
       8.28   115.80    .255E+06    3473.3          7.71       1.23
       8.77   116.29    .282E+06    3812.4          7.67       1.23

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50430) 1079.33   63.60    6.58  63.04      1.44      2.58
   OUTFLOW: ID= 1 ( 60430) 1079.33   63.62    6.67  63.04      1.44      2.57


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--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70        19.42
     Dep. Storage     (mm)=       2.00         6.60
     Average Slope     (%)=       2.50         2.50
     Length            (m)=     617.06        45.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     135.12        86.98
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       5.59 (ii)   13.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.20         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=      13.31         2.79         15.730 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17          6.08
     RUNOFF VOLUME    (mm)=     100.36        51.03         83.09
     TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
     RUNOFF COEFFICIENT   =       0.98         0.50          0.81


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  74.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40440):    57.11  15.730     6.08    83.09
      + ID2= 2 ( 60430):  1079.33  63.623     6.67    63.04
        ================================================
        ID = 3 ( 50440):  1136.44  66.532     6.58    64.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         104.01        0.0450
                 10.00         103.90        0.0450
                 20.00         103.74        0.0450
                 30.00         103.66        0.0450
                 40.00         103.60        0.0450
                 50.00         102.52        0.0450
                 60.00         101.16        0.0450
                 70.00         100.60        0.0450
                 80.00         100.17        0.0450
                 90.00          99.85        0.0450
                100.00          97.89        0.0350      Main Channel
                110.00          97.62        0.0350      Main Channel
                120.00          99.12        0.0450
                130.00          99.16        0.0450
                140.00          99.36        0.0450
                150.00          99.66        0.0450
                160.00          99.68        0.0450
                180.00          99.76        0.0450
                190.00         104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.27    97.89    .102E+04       1.2          0.77      13.74
       0.60    98.21    .381E+04       9.4          1.56       6.74
       0.92    98.53    .738E+04      24.3          2.08       5.05
       1.24    98.86    .117E+05      46.2          2.50       4.22
       1.56    99.18    .171E+05      76.6          2.84       3.71
       1.89    99.50    .264E+05     124.5          2.98       3.53
       2.21    99.82    .403E+05     189.1          2.96       3.56
       2.53   100.15    .597E+05     286.1          3.03       3.48
       2.85   100.47    .809E+05     417.7          3.26       3.23
       3.17   100.79    .104E+06     580.2          3.53       2.98
       3.50   101.11    .128E+06     771.7          3.81       2.77
       3.82   101.44    .153E+06     996.3          4.10       2.57
       4.14   101.76    .179E+06    1248.4          4.40       2.40
       4.46   102.08    .206E+06    1526.4          4.68       2.25
       4.79   102.40    .233E+06    1829.8          4.96       2.13
       5.11   102.73    .261E+06    2156.4          5.22       2.02
       5.43   103.05    .290E+06    2507.0          5.47       1.93
       5.75   103.37    .319E+06    2882.7          5.71       1.85
       6.08   103.69    .350E+06    3194.7          5.77       1.83

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50440) 1136.44   66.53    6.58  64.05      1.46      2.72
   OUTFLOW: ID= 1 ( 60440) 1136.44   66.21    6.67  64.05      1.45      2.71


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--------------------
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37        17.02
     Dep. Storage     (mm)=       2.00         6.90
     Average Slope     (%)=       0.80         0.80
     Length            (m)=     450.16       150.00
     Mannings n           =      0.015        0.300

     Max.Eff.Inten.(mm/hr)=     135.12        56.74
                   over (min)       5.00        40.00
     Storage Coeff.  (min)=       6.51 (ii)   35.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.18         0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.37         1.47          4.943 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.58          6.08
     RUNOFF VOLUME    (mm)=     100.36        54.70         73.42
     TOTAL RAINFALL   (mm)=     102.36       102.36        102.36
     RUNOFF COEFFICIENT   =       0.98         0.53          0.72


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  77.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40450):    30.40   4.943     6.08    73.42
      + ID2= 2 ( 60440):  1136.44  66.211     6.67    64.05
        ================================================
        ID = 3 ( 50450):  1166.84  68.123     6.67    64.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          97.16        0.0450
                  3.00          96.00        0.0450
                  6.00          95.32        0.0450
                  9.00          94.64        0.0450
                 12.00          94.43        0.0450
                 15.00          94.29        0.0450
                 18.00          94.10        0.0350      Main Channel
                 21.00          94.02        0.0350      Main Channel
                 24.00          93.70        0.0350      Main Channel
                 27.00          94.22    0.0350 /0.0450  Main Channel
                 30.00          94.90        0.0450
                 32.00          95.30        0.0450
                 34.00          95.78        0.0450
                 36.00          96.25        0.0450
                 38.00          96.60        0.0450
                 48.00          97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.13    93.83    .942E+02       0.1          0.39      30.45
       0.27    93.96    .377E+03       0.3          0.62      19.18
       0.40    94.09    .911E+03       0.9          0.69      17.28
       0.59    94.29    .230E+04       3.4          1.06      11.15
       0.78    94.48    .428E+04       7.9          1.32       8.98
       0.97    94.67    .679E+04      14.6          1.53       7.74
       1.16    94.86    .963E+04      23.7          1.75       6.77
       1.35    95.05    .127E+05      34.9          1.96       6.07
       1.54    95.24    .160E+05      48.1          2.14       5.54
       1.73    95.43    .196E+05      63.6          2.31       5.13
       1.92    95.62    .233E+05      81.2          2.48       4.79
       2.11    95.81    .273E+05     101.0          2.63       4.51
       2.30    96.00    .315E+05     123.0          2.78       4.27
       2.49    96.19    .360E+05     147.8          2.93       4.06
       2.68    96.38    .406E+05     174.6          3.07       3.87
       2.87    96.57    .454E+05     203.7          3.20       3.71
       3.06    96.76    .505E+05     232.7          3.28       3.62
       3.25    96.95    .562E+05     264.9          3.36       3.54
       3.44    97.14    .624E+05     300.8          3.43       3.46

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50450) 1166.84   68.12    6.67  64.29      1.78      2.35
   OUTFLOW: ID= 1 ( 60450) 1166.84   67.29    6.75  64.29      1.77      2.34


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36         7.04
```

```
      Dep. Storage     (mm)=       2.00         6.68
      Average Slope     (%)=       2.40         2.40
      Length            (m)=     386.43        40.00
      Mannings n           =      0.015        0.280

      Max.Eff.Inten.(mm/hr)=     135.12       144.26
                    over (min)       5.00        15.00
      Storage Coeff.  (min)=       4.27 (ii)   10.45 (ii)
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.23         0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=       4.36         1.91          6.064 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
      RUNOFF VOLUME    (mm)=     100.36        59.12          80.91
      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
      RUNOFF COEFFICIENT   =       0.98         0.58           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  72.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40460):    22.40   6.064     6.08    80.91
      + ID2= 2 ( 60450):  1166.84  67.294     6.75    64.29
        ================================================
        ID = 3 ( 50460):  1189.24  68.030     6.75    64.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         91.61        0.0450
                   3.00         91.57        0.0450
                   6.00         91.15        0.0450
                   9.00         90.70        0.0450
                  12.00         89.72        0.0450
                  15.00         88.86        0.0450
                  18.00         88.38    0.0450 /0.0350  Main Channel
                  21.00         87.96        0.0350      Main Channel
                  24.00         88.18    0.0350 /0.0450  Main Channel
                  26.00         88.19        0.0450
                  28.00         88.30        0.0450
                  30.00         90.32        0.0450
                  32.00         90.49        0.0450
                  34.00         90.80        0.0450
                  36.00         90.85        0.0450
                  38.00         90.97        0.0450
                  40.00         91.15        0.0450
                  42.00         91.29        0.0450
                  44.00         91.40        0.0450
                  46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.11   88.07    .589E+02       0.0        0.34      23.89
        0.21   88.18    .235E+03       0.3        0.54      15.05
        0.41   88.38    .106E+04       1.8        0.85       9.64
        0.61   88.57    .211E+04       5.3        1.22       6.69
        0.81   88.77    .330E+04      10.2        1.51       5.40
        1.01   88.97    .462E+04      16.6        1.76       4.63
        1.21   89.17    .603E+04      24.5        1.99       4.10
        1.41   89.37    .753E+04      33.8        2.19       3.72
        1.61   89.57    .912E+04      44.4        2.38       3.42
        1.81   89.77    .108E+05      56.4        2.56       3.19
        2.00   89.97    .125E+05      69.9        2.72       2.99
        2.20   90.17    .144E+05      84.7        2.88       2.83
        2.40   90.37    .163E+05      99.8        3.00       2.72
        2.60   90.56    .184E+05     114.7        3.04       2.68
        2.80   90.76    .208E+05     132.8        3.13       2.61
        3.00   90.96    .235E+05     148.4        3.09       2.64
        3.20   91.16    .266E+05     170.7        3.13       2.60
        3.40   91.36    .302E+05     194.9        3.16       2.58
        3.60   91.56    .342E+05     223.5        3.20       2.55

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50460) 1189.24    68.03    6.75  64.61      1.98      2.70
   OUTFLOW: ID= 1 ( 60460) 1189.24    68.05    6.75  64.60      1.98      2.70


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--------------------
| CALIB            |
| STANDHYD ( 40470)|   Area    (ha)=  90.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  54.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       59.53         30.66
      Dep. Storage     (mm)=        2.00          5.90
      Average Slope     (%)=        1.40          1.40
      Length            (m)=      775.42         40.00
      Mannings n           =       0.015         0.280

      Max.Eff.Inten.(mm/hr)=      135.12        134.28
                    over (min)       10.00         20.00
      Storage Coeff.  (min)=        7.62 (ii)    15.10 (ii)
      Unit Hyd. Tpeak (min)=       10.00         20.00
      Unit Hyd. peak  (cms)=        0.13          0.07
                                                          *TOTALS*
      PEAK FLOW       (cms)=       15.60          6.38         20.258 (iii)
      TIME TO PEAK    (hrs)=        6.08          6.25          6.08
      RUNOFF VOLUME    (mm)=      100.36         61.19         82.34
      TOTAL RAINFALL   (mm)=      102.36        102.36        102.36
      RUNOFF COEFFICIENT   =        0.98          0.60          0.80

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  76.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50470)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40470):    90.19  20.258     6.08    82.34
      + ID2= 2 ( 60460):  1189.24  68.050     6.75    64.60
        ================================================
        ID = 3 ( 50470):  1279.43  72.232     6.75    65.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60470)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         89.19        0.0450
                   2.00         88.89        0.0450
                   4.00         88.54        0.0450
                   6.00         88.31        0.0450
                   8.00         88.14        0.0450
                  10.00         88.02        0.0450
                  12.00         87.99        0.0450
                  14.00         87.90        0.0450
                  16.00         87.84        0.0450
                  19.00         87.55        0.0450
                  22.00         86.85        0.0450
                  25.00         86.23        0.0350      Main Channel
                  28.00         86.23        0.0350      Main Channel
                  31.00         86.60        0.0450
                  34.00         87.49        0.0450
                  37.00         88.15        0.0450
                  41.00         88.21        0.0450
                  45.00         88.29        0.0450
                  48.00         88.36        0.0450
                  50.00         89.13        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.01   86.23    .467E+01       0.0        0.03     307.39
        0.16   86.38    .381E+03       0.3        0.45      22.82
        0.31   86.54    .942E+03       1.0        0.65      15.77
        0.46   86.69    .167E+04       2.3        0.85      12.10
        0.61   86.84    .253E+04       4.2        1.03       9.95
        0.77   86.99    .350E+04       6.7        1.18       8.66
        0.92   87.15    .458E+04       9.8        1.32       7.78
        1.07   87.30    .576E+04      13.5        1.44       7.13
        1.22   87.45    .706E+04      17.7        1.54       6.63
        1.38   87.60    .847E+04      22.5        1.63       6.28
        1.53   87.76    .101E+05      27.8        1.69       6.05
        1.68   87.91    .119E+05      33.3        1.72       5.97
        1.83   88.06    .142E+05      39.8        1.72       5.96
        1.99   88.21    .170E+05      47.4        1.71       5.97
        2.14   88.36    .206E+05      57.3        1.71       5.99
        2.29   88.52    .247E+05      70.7        1.76       5.81
        2.44   88.67    .289E+05      86.1        1.83       5.59
        2.60   88.82    .332E+05     103.2        1.91       5.36
        2.75   88.97    .376E+05     121.7        1.99       5.15

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50470) 1279.43    72.23    6.75  65.86      2.31      1.77
   OUTFLOW: ID= 1 ( 60470) 1279.43    71.13    6.83  65.85      2.29      1.76


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| CALIB            |
| STANDHYD ( 40480)|   Area    (ha)=  56.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.88   Dir. Conn.(%)=  58.98
--------------------
                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       42.82         13.61
      Dep. Storage     (mm)=        2.00          5.80
      Average Slope     (%)=        1.90          1.90
      Length            (m)=      613.35         40.00
      Mannings n           =       0.015         0.260

      Max.Eff.Inten.(mm/hr)=      135.12        190.31
                    over (min)       5.00         15.00
      Storage Coeff.  (min)=        6.04 (ii)    10.59 (ii)
      Unit Hyd. Tpeak (min)=       5.00         15.00
      Unit Hyd. peak  (cms)=       0.19          0.09
                                                          *TOTALS*
      PEAK FLOW       (cms)=      11.80          4.95         16.308 (iii)
      TIME TO PEAK    (hrs)=       6.08          6.17          6.08
      RUNOFF VOLUME    (mm)=     100.36         70.53         88.12
      TOTAL RAINFALL   (mm)=     102.36        102.36        102.36
      RUNOFF COEFFICIENT   =       0.98          0.69          0.86

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN*  =  78.9    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50480)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40480):    56.43  16.308     6.08    88.12
      + ID2= 2 ( 60470):  1279.43  71.127     6.83    65.85
        ================================================
        ID = 3 ( 50480):  1335.86  72.984     6.75    66.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60480)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         86.90        0.0450
                   2.00         86.76        0.0450
                   4.00         85.96        0.0450
                   6.00         85.44        0.0450
                   8.00         84.83        0.0450
                  10.00         84.50        0.0450
                  12.00         84.15        0.0450
                  14.00         83.85        0.0350      Main Channel
                  16.00         83.86        0.0350      Main Channel
                  18.00         83.99    0.0350 /0.0450  Main Channel
                  20.00         84.27        0.0450
                  22.00         84.55        0.0450
                  24.00         84.88        0.0450
                  26.00         85.37        0.0450
                  27.00         85.68        0.0450
                  28.00         85.91        0.0450
                  29.00         86.08        0.0450
                  30.00         86.21        0.0450
                  31.00         86.29        0.0450
                  34.00         86.87        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.16   84.01    .165E+03       0.3        0.48      10.34
        0.32   84.17    .460E+03       1.2        0.77       6.41
        0.48   84.33    .855E+03       2.8        0.98       5.07
        0.64   84.48    .135E+04       5.2        1.14       4.35
        0.80   84.64    .193E+04       8.3        1.28       3.88
        0.95   84.80    .261E+04      12.3        1.40       3.53
        1.11   84.96    .337E+04      17.4        1.53       3.23
        1.27   85.12    .419E+04      23.5        1.66       2.97
        1.43   85.28    .506E+04      30.5        1.79       2.77
        1.59   85.44    .599E+04      38.5        1.90       2.60
        1.75   85.60    .697E+04      47.3        2.01       2.46
        1.91   85.76    .801E+04      57.1        2.12       2.34
        2.07   85.92    .911E+04      67.8        2.21       2.24
        2.23   86.07    .103E+05      79.5        2.30       2.15
        2.39   86.23    .115E+05      91.9        2.37       2.09
        2.54   86.39    .128E+05     105.7        2.45       2.02
        2.70   86.55    .142E+05     121.2        2.53       1.95
        2.86   86.71    .156E+05     138.0        2.62       1.89
        3.02   86.87    .171E+05     153.0        2.65       1.87

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50480) 1335.86    72.98    6.75  66.79      2.14      2.25
   OUTFLOW: ID= 1 ( 60480) 1335.86    72.99    6.83  66.79      2.13      2.24


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| CALIB            |
| STANDHYD ( 40490)|   Area    (ha)=  16.76
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```
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.18   Dir. Conn.(%)=  60.42
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.60         4.16
     Dep. Storage     (mm)=       2.00         6.22
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     334.28        53.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     135.12       175.02
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.60 (ii)   12.39 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.23         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.71         1.31          4.881 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17           6.08
     RUNOFF VOLUME    (mm)=     100.36        68.68          87.82
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.67           0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50490)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40490):    16.76   4.881     6.08    87.82
      + ID2= 2 ( 60480):  1335.86  72.986     6.83    66.79
        ================================================
        ID = 3 ( 50490):  1352.62  73.496     6.83    67.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60490)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00          85.84         0.0450
                  6.00          84.32         0.0450
                 12.00          84.21         0.0450
                 18.00          84.12         0.0450
                 24.00          84.08         0.0450
                 30.00          84.10         0.0450
                 36.00          84.03         0.0450
                 42.00          83.92         0.0450
                 48.00          83.88         0.0450
                 54.00          82.88         0.0350      Main Channel
                 60.00          83.12    0.0350 /0.0450   Main Channel
                 64.00          83.65         0.0450
                 68.00          83.60         0.0450
                 72.00          83.67         0.0450
                 76.00          83.70         0.0450
                 80.00          83.82         0.0450
                 84.00          83.90         0.0450
                 88.00          84.05         0.0450
                 92.00          84.16         0.0450
                100.00          85.83         0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.16    83.04    .332E+03       0.1          0.32      46.08
       0.31    83.19    .129E+04       0.8          0.57      26.14
       0.47    83.35    .259E+04       2.3          0.79      18.75
       0.62    83.50    .418E+04       4.5          0.96      15.43
       0.78    83.66    .626E+04       7.3          1.04      14.28
       0.93    83.81    .101E+05      11.9          1.05      14.10
       1.09    83.97    .153E+05      17.6          1.02      14.55
       1.24    84.13    .231E+05      26.2          1.00      14.73
       1.40    84.28    .341E+05      41.2          1.07      13.79
       1.55    84.44    .460E+05      61.7          1.19      12.44
       1.71    84.59    .582E+05      86.6          1.32      11.21
       1.86    84.75    .706E+05     115.2          1.45      10.21
       2.02    84.90    .831E+05     147.5          1.57       9.39
       2.17    85.06    .959E+05     183.2          1.70       8.72
       2.33    85.21    .109E+06     222.2          1.81       8.16
       2.48    85.37    .122E+06     264.5          1.93       7.68
       2.64    85.52    .135E+06     310.0          2.03       7.27
       2.79    85.68    .149E+06     358.5          2.14       6.91
       2.95    85.83    .162E+06     410.1          2.24       6.60

                                  <---- hydrograph ---->   <-pipe / channel->
                           AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                           (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50490) 1352.62    73.50    6.83  67.05      1.63      1.25
   OUTFLOW: ID= 1 ( 60490) 1352.62    71.89    6.92  67.05      1.61      1.24


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40810)|   Area    (ha)=  20.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.13   Dir. Conn.(%)=  61.23
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.92         4.72
     Dep. Storage     (mm)=       2.00         5.43
     Average Slope     (%)=       2.10         2.10
     Length            (m)=     370.92        40.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=     135.12       189.26
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.34 (ii)    8.60 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       4.65         1.95          6.595 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        70.45          88.76
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.69           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50810)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40810):    20.64   6.595     6.08    88.76
      + ID2= 2 ( 60490):  1352.62  71.894     6.92    67.05
        ================================================
        ID = 3 ( 50810):  1373.26  72.383     6.92    67.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40500)|   Area    (ha)=   9.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  26.99   Dir. Conn.(%)=  17.48
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.52         6.81
     Dep. Storage     (mm)=       2.00         9.76
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     249.31        47.00
     Mannings n           =      0.015        0.350

     Max.Eff.Inten.(mm/hr)=     135.12       102.94
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       3.01 (ii)   11.18 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.61         1.26          1.722 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17           6.08
     RUNOFF VOLUME    (mm)=     100.36        54.26          62.32
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.53           0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  76.7    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40500):     9.32   1.722     6.08    62.32
      + ID2= 2 ( 50810):  1373.26  72.383     6.92    67.38
        ================================================
        ID = 3 ( 50500):  1382.58  72.628     6.92    67.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.93   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.173 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.061
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       3.89         0.04
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=     115.50         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     135.12       108.03
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       3.25 (ii)    3.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.27         0.27
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.45         0.01          1.463 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        67.14         100.03
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.66           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n           =      0.013        0.030

     Max.Eff.Inten.(mm/hr)=     135.12       108.03
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.93 (ii)    1.93 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.31         0.31
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.00          0.169 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        67.14         100.03
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.66           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25        13.25
     Dep. Storage     (mm)=       2.00         1.50
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     420.00        30.00
     Mannings n           =      0.013        0.025

     Max.Eff.Inten.(mm/hr)=     135.12       153.23
                   over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.35 (ii)    5.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.92         4.91          7.832 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        69.96          79.08
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.68           0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  80.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
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      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | RESERVOIR(******)|     OVERFLOW IS ON
 | IN= 2---> OUT= 1 |
 | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
 --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    1.8600      0.9862
                           0.0560      0.3250   |    2.1000      1.0580
                           0.2600      0.4718   |    2.2000      1.2000
                           0.7400      0.6512   |   10.0000      1.2500
                           1.4100      0.8427   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
    INFLOW : ID= 2 (******)     26.500     7.832      6.08      79.08
    OUTFLOW: ID= 1 (******)     26.500     2.128      6.33      79.02
    OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                    TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                    PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 27.17
                    TIME SHIFT OF PEAK FLOW         (min)= 15.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.1006

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   --------------------------
   | Junction Command(30651006) |
   --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)    (mm)
   INFLOW : ID= 3(30651003)    0.00     0.00    0.00     0.00
   OUTFLOW: ID= 2(30651006)    0.00     0.00    0.00     0.00

   ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
 *** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
 *** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
         ID1= 1 (******):    26.50   2.128     6.33    79.02
       + ID2= 2 (******):     0.00   0.000     0.00     0.00
         ================================================
         ID = 3 (******):    26.50   2.128     6.33    79.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):    26.50   2.128     6.33    79.02
       + ID2= 2 (******):     0.93   0.173     6.17    67.06
         ================================================
         ID = 1 (******):    27.43   2.280     6.25    78.62

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    27.43   2.280     6.25    78.62
       + ID2= 2 (******):     3.93   1.463     6.08   100.03
         ================================================
         ID = 3 (******):    31.36   3.127     6.08    81.30

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (******):    31.36   3.127     6.08    81.30
       + ID2= 2 (******):     0.45   0.169     6.08   100.03
         ================================================
         ID = 1 (******):    31.81   3.296     6.08    81.57

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=  14.62   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.45

      Unit Hyd Qpeak  (cms)=   1.241

      PEAK FLOW       (cms)=   1.711 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  67.130
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.656

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):    14.62   1.711     6.42    67.13
       + ID2= 2 (******):    31.81   3.296     6.08    81.57
         ================================================
         ID = 3 (******):    46.43   4.351     6.08    77.02

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0450
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.05   441.45    .114E+03       0.0         0.27      55.89
         0.11   441.50    .457E+03       0.2         0.43      35.21
         0.16   441.56    .103E+04       0.6         0.57      26.87
         0.22   441.61    .185E+04       1.4         0.67      22.84
         0.27   441.67    .297E+04       2.5         0.77      19.84
         0.33   441.72    .437E+04       4.1         0.87      17.59
         0.38   441.78    .605E+04       6.4         0.96      15.85
         0.44   441.83    .802E+04       9.2         1.05      14.47
         0.49   441.89    .103E+05      12.8         1.14      13.35
         0.55   441.94    .128E+05      17.2         1.23      12.42
         0.60   442.00    .157E+05      22.4         1.31      11.63
         0.66   442.05    .188E+05      28.3         1.38      11.07
         0.71   442.11    .225E+05      36.9         1.50      10.16
         0.78   442.17    .277E+05      48.4         1.60       9.54
         0.84   442.24    .339E+05      61.9         1.67       9.13
         0.91   442.30    .412E+05      77.1         1.71       8.90
         0.97   442.36    .495E+05      94.7         1.75       8.71
         1.03   442.43    .589E+05     114.9         1.79       8.54
         1.10   442.49    .693E+05     137.9         1.82       8.38

                                                <---- hydrograph ---->   <-pipe / channel->
                                    AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                    (ha)     (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)       46.43      4.35     6.08   77.02      0.34      0.88
    OUTFLOW: ID= 1 (******)       46.43      3.79     6.58   77.02      0.32      0.84


 ------------------------------------------------------------------------------
 --------------------
 | DIVERTHYD(******)|
 | IN= 1   # OUT= 5 |
 --------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         0.92     0.00     0.00     0.00     0.00     0.92
         1.00     0.73     0.00     0.00     0.00     1.73
         1.00     1.11     0.00     0.00     0.00     2.11
         1.00     1.60     0.00     0.00     0.00     2.60
         1.00     2.08     0.00     0.00     0.00     3.08
         1.00     2.63     0.00     0.00     0.00     3.63
         1.00     4.53     0.00     0.00     0.00     5.53

                               AREA     QPEAK     TPEAK     R.V.
                               (ha)     (cms)     (hrs)     (mm)
      TOTAL HYD.(ID= 1):     46.43      3.79      6.58    77.02
      ================================================================
      ID= 2  (   2)    :     30.04      1.00      6.58    77.02
      ID= 3  (   2)    :     16.39      2.79      6.58    77.02
      ID= 4  (   2)    :      0.00      0.00      0.00     0.00
      ID= 5  (   2)    :      0.00      0.00      0.00     0.00
      ID= 6  (   2)    :      0.00      0.00      0.00     0.00
 ------------------------------------------------------------------------------
 --------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0000
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.05   441.45    .128E+03       0.0         0.29      60.12
         0.11   441.50    .514E+03       0.2         0.45      37.87
         0.16   441.56    .116E+04       0.7         0.59      28.90
         0.22   441.61    .208E+04       1.4         0.70      24.57
         0.27   441.67    .333E+04       2.6         0.80      21.34
         0.33   441.72    .490E+04       4.3         0.91      18.92
         0.38   441.78    .680E+04       6.6         1.01      17.05
         0.44   441.83    .901E+04       9.6         1.10      15.57
         0.49   441.89    .115E+05      13.4         1.19      14.36
         0.55   441.94    .144E+05      18.0         1.28      13.36
         0.60   442.00    .176E+05      23.4         1.37      12.51
         0.66   442.05    .211E+05      29.5         1.44      11.91
         0.71   442.11    .253E+05      38.5         1.57      10.93
         0.78   442.17    .311E+05      50.5         1.67      10.26
         0.84   442.24    .381E+05      64.7         1.74       9.82
         0.91   442.30    .463E+05      80.5         1.79       9.57
         0.97   442.36    .556E+05      98.9         1.83       9.37
         1.03   442.43    .661E+05     120.0         1.86       9.19
         1.10   442.49    .779E+05     144.1         1.90       9.01

                                                <---- hydrograph ---->   <-pipe / channel->
                                    AREA     QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                                    (ha)     (cms)    (hrs)    (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)       30.04      1.00     6.58   77.02      0.19      0.64
    OUTFLOW: ID= 1 (******)       30.04      0.99     7.75   77.02      0.19      0.63


 ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   4.24   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.46

      Unit Hyd Qpeak  (cms)=   0.352

      PEAK FLOW       (cms)=   0.489 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  67.131
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.656

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (******):     4.24   0.489     6.42    67.13
       + ID2= 2 (******):    30.04   0.993     7.75    77.02
         ================================================
         ID = 3 (******):    34.28   1.336     6.58    75.79

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (******)|   Area     (ha)=   2.59   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.29

      Unit Hyd Qpeak  (cms)=   0.341

      PEAK FLOW       (cms)=   0.410 (i)
      TIME TO PEAK    (hrs)=   6.250
      RUNOFF VOLUME    (mm)=  67.106
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.656

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
```

```
                      (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (******):     2.59   0.410     6.25    67.11
       + ID2= 2 (******):    34.28   1.336     6.58    75.79
         ================================================
         ID = 3 (******):    36.87   1.646     6.33    75.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        429.12        0.0500
                 37.54        428.86        0.0500
                 53.31        428.70        0.0500
                 81.17        428.24        0.0500
                 99.28        428.15    0.0500 /0.0300  Main Channel
                114.53        427.72        0.0300      Main Channel
                119.88        426.51        0.0300      Main Channel
                124.17        425.84        0.0300      Main Channel
                206.01        425.90        0.0300      Main Channel
                209.64        426.51        0.0300      Main Channel
                214.21        426.89        0.0300      Main Channel
                231.49        427.17        0.0300      Main Channel
                268.61        427.89    0.0300 /0.0500  Main Channel
                351.58        428.15        0.0500
                368.27        428.31        0.0500
                405.75        428.52        0.0500
                416.79        428.59        0.0500
                440.06        428.76        0.0500
                469.88        428.97        0.0500

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.16   426.00    .187E+04        9.2         0.88       3.40
       0.31   426.16    .424E+04       35.4         1.49       2.00
       0.47   426.32    .666E+04       74.1         1.98       1.50
       0.63   426.47    .914E+04      123.7         2.41       1.23
       0.79   426.63    .117E+05      182.8         2.79       1.07
       0.94   426.79    .143E+05      251.2         3.13       0.95
       1.10   426.95    .170E+05      323.1         3.39       0.88
       1.26   427.10    .199E+05      394.0         3.52       0.84
       1.42   427.26    .232E+05      479.1         3.69       0.81
       1.57   427.42    .267E+05      577.3         3.86       0.77
       1.73   427.58    .304E+05      687.4         4.03       0.74
       1.89   427.73    .344E+05      808.6         4.20       0.71
       2.05   427.89    .387E+05      927.4         4.28       0.70
       2.23   428.07    .449E+05     1119.2         4.45       0.67
       2.41   428.25    .531E+05     1356.2         4.56       0.65
       2.59   428.43    .627E+05     1638.9         4.66       0.64
       2.77   428.61    .737E+05     1955.8         4.73       0.63
       2.95   428.79    .859E+05     2310.2         4.79       0.62
       3.13   428.97    .996E+05     2701.5         4.84       0.61

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 (******)    36.87     1.65    6.33  75.18      0.03      0.88
OUTFLOW: ID= 1 (******)    36.87     1.64    6.42  75.18      0.03      0.88


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

     Unit Hyd Qpeak  (cms)=   0.090

     PEAK FLOW       (cms)=   0.091 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  66.979
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.654

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=  11.13   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.42

     Unit Hyd Qpeak  (cms)=   1.012

     PEAK FLOW       (cms)=   1.368 (i)
     TIME TO PEAK    (hrs)=   6.333
     RUNOFF VOLUME    (mm)=  67.129
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.75   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.143 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.047
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area    (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      54.14        24.23
     Dep. Storage     (mm)=       2.00         5.78
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     722.82        47.00
     Mannings n           =      0.015        0.260

     Max.Eff.Inten.(mm/hr)=     135.12       150.51
                   over (min)       10.00        20.00
     Storage Coeff.  (min)=       7.66 (ii)   15.53 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.13         0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=      14.11         5.65         18.275 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.25           6.08
     RUNOFF VOLUME    (mm)=     100.36        66.19          85.41
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.65           0.83

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        144.07        0.0450
                  9.00        143.84        0.0450
                 12.00        142.90        0.0450
                 15.00        142.48        0.0450
                 18.00        142.43    0.0450 /0.0350  Main Channel
                 21.00        142.31        0.0350      Main Channel
                 24.00        142.12        0.0350      Main Channel
                 27.00        142.44    0.0350 /0.0450  Main Channel
                 30.00        142.71        0.0450
                 33.00        143.18        0.0450
                 36.00        143.27        0.0450
                 37.00        143.36        0.0450
                 38.00        143.64        0.0450
                 39.00        143.92        0.0450
                 40.00        143.93        0.0450
                 45.00        144.18        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.08   142.20    .282E+02        0.0         0.24      26.26
       0.16   142.27    .113E+03        0.1         0.38      16.54
       0.23   142.35    .257E+03        0.3         0.48      13.09
       0.31   142.43    .477E+03        0.7         0.57      11.02
       0.42   142.54    .969E+03        2.0         0.76       8.24
       0.53   142.65    .157E+04        3.8         0.92       6.80
       0.64   142.76    .224E+04        6.3         1.06       5.90
       0.75   142.87    .299E+04        9.5         1.19       5.26
       0.86   142.98    .379E+04       13.2         1.31       4.77
       0.97   143.09    .463E+04       17.6         1.43       4.37
       1.08   143.20    .552E+04       22.5         1.53       4.09
       1.19   143.31    .653E+04       27.9         1.60       3.90
       1.30   143.42    .761E+04       34.4         1.70       3.69
       1.41   143.53    .874E+04       41.7         1.79       3.49
       1.52   143.64    .989E+04       49.7         1.89       3.32
       1.63   143.75    .111E+05       58.3         1.98       3.17
       1.74   143.85    .123E+05       66.9         2.04       3.06
       1.85   143.96    .137E+05       73.2         2.01       3.11
       1.96   144.07    .153E+05       81.5         2.00       3.13

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 40600)    78.37    18.28    6.08  85.41      0.98      1.44
OUTFLOW: ID= 1 ( 60600)    78.37    17.82    6.17  85.41      0.97      1.43


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40610)|   Area    (ha)=   3.94
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.52   Dir. Conn.(%)=  31.62
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.75         2.18
     Dep. Storage     (mm)=       2.00         8.00
     Average Slope     (%)=       2.90         2.90
     Length            (m)=     162.03        40.00
     Mannings n           =      0.015        0.340

     Max.Eff.Inten.(mm/hr)=     135.12       118.42
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       2.40 (ii)    9.49 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.47         0.53          0.996 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        58.21          71.54
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.57           0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  76.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50600)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40610):     3.94    0.996     6.08    71.54
     + ID2= 2 ( 60600):    78.37   17.816     6.17    85.41
       ================================================
       ID = 3 ( 50600):    82.31   18.440     6.17    84.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60610)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00        143.40        0.0450
                  2.00        142.92        0.0450
                  4.00        142.14        0.0450
                  6.00        141.49        0.0450
                  8.00        141.11        0.0450
                 10.00        141.00    0.0450 /0.0350  Main Channel
                 12.00        140.98        0.0350      Main Channel
                 14.00        140.82        0.0350      Main Channel
                 16.00        141.02    0.0350 /0.0450  Main Channel
                 18.00        141.19        0.0450
                 20.00        141.19        0.0450
                 22.00        141.44        0.0450
                 24.00        142.00        0.0450
                 26.00        142.20        0.0450
                 28.00        142.39        0.0450
                 30.00        142.96        0.0450
                 31.00        143.13        0.0450
                 32.00        143.28        0.0450
                 33.00        143.41        0.0450
                 34.00        143.44        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   140.91    .314E+02        0.0         0.24      23.12
       0.18   141.00    .132E+03        0.1         0.31      17.83
       0.33   141.14    .502E+03        0.9         0.58       9.54
       0.47   141.29    .107E+04        2.4         0.74       7.47
       0.61   141.43    .175E+04        4.7         0.89       6.20
       0.75   141.57    .251E+04        7.9         1.05       5.31
       0.89   141.71    .332E+04       11.8         1.19       4.68
       1.03   141.85    .416E+04       16.5         1.32       4.21
       1.17   141.99    .506E+04       21.8         1.44       3.86
       1.31   142.13    .601E+04       27.5         1.52       3.64
       1.45   142.27    .705E+04       34.0         1.61       3.46
       1.59   142.41    .818E+04       41.5         1.69       3.29
       1.73   142.55    .936E+04       50.2         1.79       3.11
       1.88   142.69    .106E+05       59.8         1.88       2.95
       2.02   142.84    .118E+05       70.2         1.97       2.81
       2.16   142.98    .132E+05       81.2         2.06       2.70
       2.30   143.12    .145E+05       92.6         2.12       2.61
       2.44   143.26    .159E+05      104.8         2.19       2.54
       2.58   143.40    .174E+05      117.7         2.24       2.47

                                  <---- hydrograph ---->   <-pipe / channel->
                            AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                            (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 ( 50600)    82.31    18.44    6.17  84.75      1.08      1.36
OUTFLOW: ID= 1 ( 60610)    82.31    17.26    6.17  84.75      1.05      1.33
```

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04897>
04898> ---------------------------------------------------------------------------------
04899> --------------------
04900> | CALIB            |
04901> | STANDHYD ( 40620)|   Area    (ha)=   5.67
04902> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.85   Dir. Conn.(%)=  60.66
04903> --------------------
04904>                              IMPERVIOUS    PERVIOUS (i)
04905>      Surface Area     (ha)=       4.30         1.37
04906>      Dep. Storage     (mm)=       2.00         5.59
04907>      Average Slope     (%)=       1.50         1.50
04908>      Length            (m)=     194.41        43.00
04909>      Mannings n            =      0.015        0.270
04910>
04911>      Max.Eff.Inten.(mm/hr)=     135.12       180.46
04912>                    over (min)        5.00        10.00
04913>      Storage Coeff.  (min)=       3.26 (ii)    9.90 (ii)
04914>      Unit Hyd. Tpeak (min)=       5.00        10.00
04915>      Unit Hyd. peak  (cms)=       0.27         0.11
04916>                                                          *TOTALS*
04917>      PEAK FLOW       (cms)=       1.28         0.51          1.794 (iii)
04918>      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
04919>      RUNOFF VOLUME    (mm)=     100.36        69.68          88.29
04920>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
04921>      RUNOFF COEFFICIENT   =       0.98         0.68           0.86
04922>
04923> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
04924>
04925>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
04926>             CN*  =  79.0    Ia = Dep. Storage  (Above)
04927>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
04928>            THAN THE STORAGE COEFFICIENT.
04929>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04930>
04931> ---------------------------------------------------------------------------------
04932>
04933> --------------------
04934> | ADD HYD  ( 50610)|
04935> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04936> --------------------         (ha)    (cms)    (hrs)     (mm)
04937>        ID1= 1 ( 40620):     5.67   1.794     6.08    88.29
04938>      + ID2= 2 ( 60610):    82.31  17.262     6.17    84.75
04939>        ================================================
04940>        ID = 3 ( 50610):    87.98  18.164     6.17    84.97
04941>
04942>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04943> ---------------------------------------------------------------------------------
04944> --------------------
04945> | ROUTE CHN( 60620)|
04946> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
04947> --------------------
04948>               <------ DATA FOR SECTION (   1.1) ------>
04949>               Distance      Elevation       Manning
04950>                   0.00         142.03        0.0450
04951>                   1.00         141.71        0.0450
04952>                   2.00         141.35        0.0450
04953>                   3.00         141.01        0.0450
04954>                   4.00         140.79        0.0450
04955>                   5.00         140.56        0.0450
04956>                   6.00         140.44        0.0450
04957>                   7.00         140.30    0.0450 /0.0350  Main Channel
04958>                   8.00         140.08        0.0350      Main Channel
04959>                   9.00         139.88        0.0350      Main Channel
04960>                  10.00         139.97        0.0350      Main Channel
04961>                  11.00         140.12        0.0350      Main Channel
04962>                  12.00         140.35    0.0350 /0.0450  Main Channel
04963>                  13.00         140.52        0.0450
04964>                  14.00         140.73        0.0450
04965>                  15.00         140.97        0.0450
04966>                  16.00         141.27        0.0450
04967>                  17.00         141.57        0.0450
04968>                  18.00         141.89        0.0450
04969>                  19.00         142.07        0.0450
04970>
04971>       <---------------------- TRAVEL TIME TABLE ----------------------->
04972>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
04973>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
04974>         0.10  139.99    .161E+02       0.0         0.36       8.21
04975>         0.21  140.09    .579E+02       0.2         0.59       5.04
04976>         0.31  140.19    .120E+03       0.5         0.78       3.79
04977>         0.42  140.30    .200E+03       1.1         0.95       3.12
04978>         0.53  140.41    .313E+03       2.1         1.18       2.51
04979>         0.65  140.53    .456E+03       3.5         1.36       2.18
04980>         0.76  140.65    .630E+03       5.3         1.50       1.98
04981>         0.88  140.76    .826E+03       7.6         1.63       1.82
04982>         0.99  140.88    .104E+04      10.3         1.75       1.69
04983>         1.11  140.99    .128E+04      13.4         1.87       1.59
04984>         1.23  141.11    .154E+04      17.1         1.98       1.50
04985>         1.34  141.22    .180E+04      21.2         2.09       1.42
04986>         1.46  141.34    .209E+04      25.8         2.20       1.35
04987>         1.57  141.45    .239E+04      30.9         2.30       1.29
04988>         1.69  141.57    .270E+04      36.4         2.40       1.24
04989>         1.80  141.69    .303E+04      42.4         2.49       1.19
04990>         1.92  141.80    .337E+04      48.9         2.58       1.15
04991>         2.04  141.92    .373E+04      55.9         2.67       1.11
04992>         2.15  142.03    .411E+04      63.2         2.74       1.08
04993>
04994>                                    <---- hydrograph ---->   <-pipe / channel->
04995>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
04996>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
04997>    INFLOW : ID= 2 ( 50610)   87.98   18.16    6.17  84.97      1.26      2.01
04998>    OUTFLOW: ID= 1 ( 60620)   87.98   18.14    6.25  84.97      1.26      2.01
04999>
05000>
05001>
05002> ---------------------------------------------------------------------------------
05003> --------------------
05004> | CALIB            |
05005> | STANDHYD ( 40640)|   Area    (ha)=   2.13
05006> |ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
05007> --------------------
05008>                              IMPERVIOUS    PERVIOUS (i)
05009>      Surface Area     (ha)=       0.91         1.23
05010>      Dep. Storage     (mm)=       2.00         7.60
05011>      Average Slope     (%)=       1.70         1.70
05012>      Length            (m)=     119.23        45.00
05013>      Mannings n            =      0.015        0.330
05014>
05015>      Max.Eff.Inten.(mm/hr)=     135.12       115.95
05016>                    over (min)        5.00        15.00
05017>      Storage Coeff.  (min)=       2.34 (ii)   11.19 (ii)
05018>      Unit Hyd. Tpeak (min)=       5.00        15.00
05019>      Unit Hyd. peak  (cms)=       0.30         0.09
05020>                                                          *TOTALS*
05021>      PEAK FLOW       (cms)=       0.25         0.26          0.483 (iii)
05022>      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
05023>      RUNOFF VOLUME    (mm)=     100.36        59.11          72.14
05024>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
05025>      RUNOFF COEFFICIENT   =       0.98         0.58           0.70
05026>
05027> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05028>
05029>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05030>             CN*  =  78.1    Ia = Dep. Storage  (Above)
05031>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05032>            THAN THE STORAGE COEFFICIENT.
05033>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05034>
05035> ---------------------------------------------------------------------------------
05036>
05037> --------------------
05038> | ADD HYD  ( 50630)|
05039> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05040> --------------------         (ha)    (cms)    (hrs)     (mm)
05041>        ID1= 1 ( 40640):     2.13   0.483     6.08    72.14
05042>      + ID2= 2 ( 60620):    87.98  18.138     6.25    84.97
05043>        ================================================
05044>        ID = 3 ( 50630):    90.11  18.416     6.25    84.67
05045>
05046>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05047> ---------------------------------------------------------------------------------
05048> --------------------
05049> | CALIB            |
05050> | STANDHYD ( 40630)|   Area    (ha)=  20.54
05051> |ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
05052> --------------------
05053>                              IMPERVIOUS    PERVIOUS (i)
05054>      Surface Area     (ha)=      13.13         7.40
05055>      Dep. Storage     (mm)=       2.00         5.95
05056>      Average Slope     (%)=       1.40         1.40
05057>      Length            (m)=     370.01        42.00
05058>      Mannings n            =      0.015        0.270
05059>
05060>      Max.Eff.Inten.(mm/hr)=     135.12       137.45
05061>                    over (min)        5.00        15.00
05062>      Storage Coeff.  (min)=       4.89 (ii)   12.35 (ii)
05063>      Unit Hyd. Tpeak (min)=       5.00        15.00
05064>      Unit Hyd. peak  (cms)=       0.22         0.08
05065>                                                          *TOTALS*
05066>      PEAK FLOW       (cms)=       3.94         1.82          5.556 (iii)
05067>      TIME TO PEAK    (hrs)=       6.08         6.17           6.08
05068>      RUNOFF VOLUME    (mm)=     100.36        64.77          83.51
05069>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
05070>      RUNOFF COEFFICIENT   =       0.98         0.63           0.82
05071>
05072> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05073>
05074>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05075>             CN*  =  79.5    Ia = Dep. Storage  (Above)
05076>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05077>            THAN THE STORAGE COEFFICIENT.
05078>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05079>
05080> ---------------------------------------------------------------------------------
05081>
05082> --------------------
05083> | ADD HYD  ( 50640)|
05084> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05085> --------------------         (ha)    (cms)    (hrs)     (mm)
05086>        ID1= 1 ( 40630):    20.54   5.556     6.08    83.51
05087>      + ID2= 2 ( 50630):    90.11  18.416     6.25    84.67
05088>        ================================================
05089>        ID = 3 ( 50640):   110.65  21.708     6.17    84.46
05090>
05091>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05092> ---------------------------------------------------------------------------------
05093>
05094> --------------------
05095> | ADD HYD  (******)|
05096> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05097> --------------------         (ha)    (cms)    (hrs)     (mm)
05098>        ID1= 1 (******):     0.75   0.143     6.17    67.05
05099>      + ID2= 2 ( 50640):   110.65  21.708     6.17    84.46
05100>        ================================================
05101>        ID = 3 (******):   111.40  21.851     6.17    84.34
05102>
05103>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05104> ---------------------------------------------------------------------------------
05105>
05106> --------------------
05107> | ADD HYD  (******)|
05108> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
05109> --------------------         (ha)    (cms)    (hrs)     (mm)
05110>        ID1= 1 (******):    11.13   1.368     6.33    67.13
05111>      + ID2= 2 (******):   111.40  21.851     6.17    84.34
05112>        ================================================
05113>        ID = 3 (******):   122.53  22.994     6.17    82.77
05114>
05115>     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05116> ---------------------------------------------------------------------------------
05117> --------------------
05118> | ROUTE CHN(******)|
05119> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
05120> --------------------
05121>               <------ DATA FOR SECTION (   1.1) ------>
05122>               Distance      Elevation       Manning
05123>                   0.00         447.10        0.0450
05124>                  42.83         446.80        0.0450
05125>                  42.89         446.80        0.0450
05126>                  43.24         446.79        0.0450
05127>                 122.57         446.48        0.0450
05128>                 154.02         446.22        0.0450
05129>                 191.79         446.32    0.0450 /0.0350  Main Channel
05130>                 199.05         442.27        0.0350      Main Channel
05131>                 199.74         442.33        0.0350      Main Channel
05132>                 212.02         444.19        0.0350      Main Channel
05133>                 232.17         444.54    0.0350 /0.0450  Main Channel
05134>                 348.58         444.42        0.0450
05135>                 359.23         444.30        0.0450
05136>                 381.33         444.03        0.0450
05137>                 483.65         444.18        0.0450
05138>                 548.64         445.87        0.0450
05139>
05140>       <---------------------- TRAVEL TIME TABLE ----------------------->
05141>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
05142>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
05143>         0.19  442.46    .184E+03       0.1         0.65      24.29
05144>         0.38  442.65    .662E+03       0.7         1.01      15.64
05145>         0.57  442.84    .143E+04       2.0         1.31      12.09
05146>         0.76  443.03    .247E+04       4.1         1.57      10.05
05147>         0.95  443.22    .381E+04       7.3         1.81       8.70
05148>         1.14  443.41    .543E+04      11.7         2.04       7.73
05149>         1.33  443.60    .733E+04      17.5         2.26       6.99
05150>         1.52  443.79    .952E+04      24.8         2.46       6.41
05151>         1.71  443.98    .120E+05      33.7         2.66       5.93
05152>         1.89  444.16    .211E+05      47.0         2.11       7.49
05153>         2.08  444.35    .469E+05      73.0         1.47      10.71
05154>         2.27  444.54    .855E+05     117.6         1.30      12.12
05155>         2.46  444.73    .140E+06     240.0         1.62       9.75
05156>         2.65  444.92    .197E+06     400.4         1.92       8.20
05157>         2.84  445.11    .255E+06     595.0         2.21       7.13
05158>         3.03  445.30    .314E+06     821.8         2.48       6.37
05159>         3.22  445.49    .374E+06    1079.2         2.73       5.78
05160>         3.41  445.68    .436E+06    1366.3         2.96       5.32
05161>         3.60  445.87    .500E+06    1682.3         3.19       4.95
05162>
05163>                                    <---- hydrograph ---->   <-pipe / channel->
05164>                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
05165>                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
05166>    INFLOW : ID= 2 (******)  122.53   22.99    6.17  82.77      1.47      2.41
05167>    OUTFLOW: ID= 1 (******)  122.53   21.70    6.25  82.77      1.43      2.37
05168>
05169>
05170>
05171> ---------------------------------------------------------------------------------
05172> --------------------
05173> | CALIB            |
05174> | NASHYD   (******)|   Area    (ha)=   1.05   Curve Number   (CN)= 85.0
05175> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
05176> --------------------   U.H. Tp(hrs)=   0.23
05177>
05178>      Unit Hyd Qpeak  (cms)=   0.174
05179>
05180>      PEAK FLOW       (cms)=   0.195 (i)
05181>      TIME TO PEAK    (hrs)=   6.167
05182>      RUNOFF VOLUME    (mm)=  67.061
05183>      TOTAL RAINFALL   (mm)= 102.360
05184>      RUNOFF COEFFICIENT   =   0.655
05185>
05186>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05187>
05188> ---------------------------------------------------------------------------------
05189> --------------------
05190> | CALIB            |
05191> | NASHYD   (******)|   Area    (ha)=   1.10   Curve Number   (CN)= 85.0
05192> |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
05193> --------------------   U.H. Tp(hrs)=   0.24
05194>
05195>      Unit Hyd Qpeak  (cms)=   0.175
05196>
05197>      PEAK FLOW       (cms)=   0.199 (i)
05198>      TIME TO PEAK    (hrs)=   6.167
05199>      RUNOFF VOLUME    (mm)=  67.073
05200>      TOTAL RAINFALL   (mm)= 102.360
05201>      RUNOFF COEFFICIENT   =   0.655
05202>
```

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      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD (******)|   Area    (ha)=   2.99
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
 --------------------
                             IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.50         1.50
      Dep. Storage     (mm)=       2.00         4.13
      Average Slope     (%)=       1.00        20.00
      Length            (m)=      15.00        15.00
      Mannings n            =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=     135.12       248.54
                  over (min)        5.00         5.00
      Storage Coeff.  (min)=       0.73 (ii)    2.82 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.28
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.01         1.04          1.047 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
      RUNOFF VOLUME    (mm)=     100.36        82.99          83.16
      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
      RUNOFF COEFFICIENT   =       0.98         0.81           0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | STANDHYD (******)|   Area    (ha)=  17.55
 |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
 --------------------
                             IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      14.39         3.16
      Dep. Storage     (mm)=       2.00         4.13
      Average Slope     (%)=       1.00         2.00
      Length            (m)=      30.00        30.00
      Mannings n            =      0.013        0.025

      Max.Eff.Inten.(mm/hr)=     135.12       428.84
                  over (min)        5.00         5.00
      Storage Coeff.  (min)=       1.10 (ii)    2.05 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.34         0.31
                                                          *TOTALS*
      PEAK FLOW       (cms)=       2.70         3.78          6.478 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
      RUNOFF VOLUME    (mm)=     100.36        89.88          94.18
      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
      RUNOFF COEFFICIENT   =       0.98         0.88           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  86.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.10   0.199     6.17    67.07
      + ID2= 2 (******):     1.05   0.195     6.17    67.06
        ================================================
        ID = 3 (******):     2.15   0.393     6.17    67.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     2.15   0.393     6.17    67.07
      + ID2= 2 (******):    17.55   6.478     6.08    94.18
        ================================================
        ID = 1 (******):    19.70   6.830     6.08    91.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    19.70   6.830     6.08    91.22
      + ID2= 2 (******):     2.99   1.047     6.08    83.16
        ================================================
        ID = 3 (******):    22.69   7.877     6.08    90.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    22.69   7.877     6.08    90.16
      + ID2= 2 (******):     0.46   0.435     6.08    91.01
        ================================================
        ID = 1 (******):    23.15   8.312     6.08    90.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    23.15   8.312     6.08    90.18
      + ID2= 2 (******):     0.98   0.967     6.08    94.18
        ================================================
        ID = 3 (******):    24.13   9.279     6.08    90.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | RESERVOIR(******)|     OVERFLOW IS ON
 | IN= 2---> OUT= 1 |
 | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
 --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000      0.0000   |    0.3352      3.1110
                           0.0933      0.5687   |    0.3714      3.8158
                           0.1848      1.1636   |    0.4043      4.5492
                           0.2439      1.7854   |    0.4445      5.5626
                           0.2910      2.4344   |    0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)     24.131     9.279      6.08      90.34
   OUTFLOW: ID= 1 (******)     24.131     0.237      8.25      90.27
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.55
                  TIME SHIFT OF PEAK FLOW         (min)=130.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.7109

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  --------------------------
  | Junction Command(30651004) |
  --------------------------

                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651002)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2(30651004)    0.00     0.00    0.00     0.00

  ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    24.13   0.237     8.25    90.27
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    24.13   0.237     8.25    90.27

*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    24.13   0.237     8.25    90.27
      + ID2= 2 (******):     0.45   0.091     6.17    66.98
        ================================================
        ID = 1 (******):    24.58   0.300     6.17    89.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    24.58   0.300     6.17    89.85
      + ID2= 2 (******):   122.53  21.700     6.25    82.77
        ================================================
        ID = 3 (******):   147.11  21.989     6.25    83.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (******)|   Area    (ha)=   2.19   Curve Number   (CN)= 85.0
 |ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.27

      Unit Hyd Qpeak  (cms)=   0.310

      PEAK FLOW       (cms)=   0.362 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  67.096
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.655

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.19   0.362     6.17    67.10
      + ID2= 2 (******):   147.11  21.989     6.25    83.96
        ================================================
        ID = 3 (******):   149.30  22.348     6.25    83.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
 | ROUTE CHN(******)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        429.12        0.0450
                   37.54        428.86        0.0450
                   53.31        428.70        0.0450
                   81.17        428.24        0.0450
                   99.28        428.15    0.0450 /0.0350  Main Channel
                  114.53        427.72        0.0350      Main Channel
                  119.88        426.51        0.0350      Main Channel
                  124.17        425.84        0.0350      Main Channel
                  206.01        425.90        0.0350      Main Channel
                  209.64        426.51        0.0350      Main Channel
                  214.21        426.89        0.0350      Main Channel
                  231.49        427.17        0.0350      Main Channel
                  268.61        427.89    0.0350 /0.0450  Main Channel
                  351.58        428.15        0.0450
                  368.27        428.31        0.0450
                  405.75        428.52        0.0450
                  416.79        428.59        0.0450
                  440.06        428.76        0.0450
                  469.88        428.97        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)       (m/s)      (min)
         0.16  426.00    .218E+04       4.1         0.39       8.87
         0.31  426.16    .495E+04      15.8         0.67       5.22
         0.47  426.32    .779E+04      33.2         0.89       3.92
         0.63  426.47    .107E+05      55.4         1.08       3.22
         0.79  426.63    .137E+05      81.8         1.25       2.78
         0.94  426.79    .167E+05     112.4         1.40       2.48
         1.10  426.95    .199E+05     144.6         1.52       2.29
         1.26  427.10    .233E+05     176.4         1.58       2.20
         1.42  427.26    .271E+05     214.5         1.65       2.11
         1.57  427.42    .312E+05     258.4         1.73       2.01
         1.73  427.58    .356E+05     307.7         1.81       1.93
         1.89  427.73    .402E+05     362.0         1.88       1.85
         2.05  427.89    .452E+05     415.1         1.91       1.82
         2.23  428.07    .525E+05     501.3         1.99       1.74
         2.41  428.25    .621E+05     609.1         2.05       1.70
         2.59  428.43    .733E+05     739.1         2.10       1.65
         2.77  428.61    .862E+05     886.8         2.15       1.62
         2.95  428.79    .101E+06    1053.9         2.19       1.59
         3.13  428.97    .116E+06    1240.2         2.22       1.57

                                        <---- hydrograph ---->   <-pipe / channel->
                                 AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)  149.30    22.35    6.25  83.71      0.37      0.74
   OUTFLOW: ID= 1 (******)  149.30    21.95    6.33  83.71      0.37      0.73


 ---------------------------------------------------------------------------

 --------------------
 | ADD HYD  (******)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):   149.30  21.952     6.33    83.71
      + ID2= 2 (******):    36.87   1.638     6.42    75.18
        ================================================
        ID = 3 (******):   186.17  23.553     6.33    82.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 ---------------------------------------------------------------------------
 --------------------
```

```
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.831
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.653

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.050     6.08    66.83
      + ID2= 2 (******):    16.39   2.792     6.58    77.02
        ================================================
        ID = 3 (******):    16.61   2.804     6.58    76.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        433.07        0.0450
                  59.66        432.39        0.0450
                  94.25        432.03        0.0450
                 115.71        431.82        0.0450
                 143.84        431.84    0.0450 /0.0350  Main Channel
                 163.59        431.75        0.0350      Main Channel
                 177.84        431.73        0.0350      Main Channel
                 199.51        431.70        0.0350      Main Channel
                 231.74        431.53        0.0350      Main Channel
                 283.71        431.44        0.0350      Main Channel
                 294.09        431.43        0.0350      Main Channel
                 325.65        431.42        0.0350      Main Channel
                 355.24        431.24        0.0350      Main Channel
                 383.70        431.43        0.0350      Main Channel
                 476.17        432.06    0.0350 /0.0450  Main Channel
                 510.88        432.23        0.0450
                 558.61        432.37        0.0450
                 589.84        432.57        0.0450
                 622.97        432.73        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   431.32    .108E+03       0.3         0.30       6.68
        0.15   431.39    .434E+03       1.7         0.47       4.21
        0.23   431.47    .119E+04       5.0         0.50       3.99
        0.30   431.54    .252E+04      13.9         0.66       3.02
        0.38   431.62    .417E+04      29.3         0.84       2.37
        0.45   431.69    .604E+04      50.1         0.99       2.01
        0.53   431.77    .828E+04      73.9         1.06       1.87
        0.60   431.84    .109E+05     108.8         1.19       1.67
        0.68   431.92    .142E+05     159.5         1.34       1.48
        0.76   432.01    .176E+05     219.4         1.48       1.34
        0.84   432.09    .213E+05     290.0         1.62       1.22
        0.92   432.17    .252E+05     374.6         1.77       1.12
        1.01   432.25    .293E+05     469.2         1.91       1.04
        1.09   432.33    .338E+05     573.9         2.02       0.98
        1.17   432.41    .386E+05     689.9         2.13       0.93
        1.25   432.49    .435E+05     817.2         2.24       0.89
        1.33   432.57    .487E+05     955.3         2.34       0.85
        1.41   432.65    .541E+05    1103.5         2.43       0.82
        1.49   432.73    .597E+05    1262.7         2.52       0.79

                                  <---- hydrograph ---->   <-pipe / channel->
                          AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                          (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 (******)   16.61     2.80    6.58  76.88      0.18      0.48
OUTFLOW: ID= 1 (******)   16.61     2.77    6.67  76.88      0.17      0.48

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
```

```
--------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.102 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.832
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.653

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.565 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  67.118
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.565     6.25    67.12
      + ID2= 2 (******):     0.45   0.102     6.08    66.83
        ================================================
        ID = 3 (******):     4.32   0.635     6.25    67.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.635     6.25    67.09
      + ID2= 2 (******):    16.61   2.773     6.67    76.88
        ================================================
        ID = 1 (******):    20.93   3.150     6.58    74.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        430.79        0.0450
                  23.82        429.79    0.0450 /0.0350  Main Channel
                  44.05        429.11        0.0350      Main Channel
                  70.46        428.15        0.0350      Main Channel
                 112.31        427.60        0.0350      Main Channel
                 150.77        427.27        0.0350      Main Channel
                 179.17        427.15        0.0350      Main Channel
                 214.90        427.16        0.0350      Main Channel
                 261.89        427.25        0.0350      Main Channel
                 317.65        427.56        0.0350      Main Channel
                 382.75        427.99        0.0350      Main Channel
                 394.40        428.11        0.0350      Main Channel
                 432.80        428.07        0.0350      Main Channel
                 432.91        428.07        0.0350      Main Channel
                 462.57        428.15        0.0350      Main Channel
                 522.90        429.79    0.0350 /0.0450  Main Channel
                 585.04        429.90        0.0450
                 731.92        430.62        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.18   427.33    .207E+04      11.5         0.73       2.99
        0.35   427.50    .570E+04      49.9         1.15       1.91
        0.53   427.68    .105E+05     119.2         1.49       1.47
        0.70   427.85    .163E+05     221.8         1.79       1.22
        0.88   428.03    .229E+05     360.8         2.06       1.06
        1.06   428.21    .312E+05     509.7         2.14       1.02
        1.23   428.38    .405E+05     771.0         2.49       0.88
        1.41   428.56    .500E+05    1076.3         2.82       0.77
        1.58   428.73    .598E+05    1423.8         3.12       0.70
        1.76   428.91    .699E+05    1812.5         3.40       0.64
        1.94   429.09    .802E+05    2241.5         3.66       0.60
        2.11   429.26    .907E+05    2709.1         3.91       0.56
        2.29   429.44    .102E+06    3215.8         4.15       0.53
        2.46   429.61    .113E+06    3761.6         4.38       0.50
        2.64   429.79    .124E+06    4346.4         4.59       0.48
        2.85   430.00    .139E+06    5173.9         4.88       0.45
        3.06   430.20    .156E+06    6075.9         5.12       0.43
        3.26   430.41    .173E+06    7054.9         5.33       0.41
        3.47   430.62    .193E+06    8114.3         5.52       0.40

                                  <---- hydrograph ---->   <-pipe / channel->
                          AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                          (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
INFLOW : ID= 2 (******)   20.93     3.15    6.58  74.86      0.05      0.73
OUTFLOW: ID= 1 (******)   20.93     3.14    6.67  74.86      0.05      0.73

     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.
```

```
--------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

     Unit Hyd Qpeak  (cms)=   0.161

     PEAK FLOW       (cms)=   0.180 (i)
     TIME TO PEAK    (hrs)=   6.167
     RUNOFF VOLUME    (mm)=  67.061
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.655

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number   (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

     Unit Hyd Qpeak  (cms)=   0.146

     PEAK FLOW       (cms)=   0.144 (i)
     TIME TO PEAK    (hrs)=   6.083
     RUNOFF VOLUME    (mm)=  66.943
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.654

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.144     6.08    66.94
      + ID2= 2 (******):     0.97   0.180     6.17    67.06
        ================================================
        ID = 3 (******):     1.66   0.322     6.17    67.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.322     6.17    67.01
      + ID2= 2 (******):    20.93   3.136     6.67    74.86
        ================================================
        ID = 3 (******):    22.59   3.227     6.67    74.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):  22.59      3.23      6.67   74.29
     ================================================
     ID= 2  (   2)    :  22.59      3.23      6.67   74.29
     ID= 3  (   2)    :   0.00      0.00      6.67   74.29
     ID= 4  (   2)    :   0.00      0.00      0.00    0.00
     ID= 5  (   2)    :   0.00      0.00      0.00    0.00
     ID= 6  (   2)    :   0.00      0.00      0.00    0.00
```

```
--------------------
| CALIB             |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------

                                  IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=       0.96          0.25
     Dep. Storage      (mm)=       2.00          4.48
     Average Slope      (%)=       0.64          0.54
     Length             (m)=      63.89        157.20
     Mannings n            =      0.013         0.030

     Max.Eff.Inten.(mm/hr)=     135.12        108.03
                   over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.98 (ii)     5.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.16

                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.36          0.07          0.426 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.08          6.08
     RUNOFF VOLUME    (mm)=     100.36         67.14         93.38
     TOTAL RAINFALL   (mm)=     102.36        102.36        102.36
     RUNOFF COEFFICIENT   =       0.98          0.66          0.91
```

```
05815>
05816> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05817>
05818>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05819>             CN*  =  85.0    Ia = Dep. Storage  (Above)
05820>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05821>            THAN THE STORAGE COEFFICIENT.
05822>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05823>
05824> --------------------------------------------------------------------------------
05825> --------------------
05826> | CALIB            |
05827> | STANDHYD (******)|   Area    (ha)=   2.90
05828> |ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
05829> --------------------
05830>                              IMPERVIOUS    PERVIOUS (i)
05831>      Surface Area     (ha)=       2.32         0.58
05832>      Dep. Storage     (mm)=       2.00         4.48
05833>      Average Slope     (%)=       0.70         0.60
05834>      Length            (m)=     166.18       124.91
05835>      Mannings n            =      0.013        0.030
05836>
05837>      Max.Eff.Inten.(mm/hr)=     135.12       108.03
05838>                   over (min)        5.00        10.00
05839>      Storage Coeff.  (min)=       3.42 (ii)    6.28 (ii)
05840>      Unit Hyd. Tpeak (min)=       5.00        10.00
05841>      Unit Hyd. peak  (cms)=       0.26         0.15
05842>                                                          *TOTALS*
05843>      PEAK FLOW       (cms)=       0.86         0.15          1.013 (iii)
05844>      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
05845>      RUNOFF VOLUME    (mm)=     100.36        67.14          93.71
05846>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
05847>      RUNOFF COEFFICIENT   =       0.98         0.66           0.92
05848>
05849> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
05850>
05851>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
05852>             CN*  =  85.0    Ia = Dep. Storage  (Above)
05853>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
05854>            THAN THE STORAGE COEFFICIENT.
05855>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
05856>
05857> --------------------------------------------------------------------------------
05858>
05859> --------------------
05860> | ADD HYD  (******)|
05861> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
05862> --------------------          (ha)    (cms)    (hrs)      (mm)
05863>         ID1= 1 (******):     2.90   1.013     6.08    93.71
05864>       + ID2= 2 (******):     1.21   0.426     6.08    93.38
05865>         ================================================
05866>         ID = 3 (******):     4.11   1.439     6.08    93.62
05867>
05868>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05869> --------------------------------------------------------------------------------
05870> --------------------
05871> | DIVERTHYD(******)|
05872> | IN= 1   # OUT= 5 |
05873> --------------------
05874>      Outflow / Inflow  Relationships
05875>
05876>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05877>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05878>        0.00     0.00     0.00     0.00     0.00     0.00
05879>        0.85     0.00     0.00     0.00     0.00     0.85
05880>        0.85     1.00     0.00     0.00     0.00     1.85
05881>        0.85   100.00     0.00     0.00     0.00   100.85
05882>
05883>                            AREA     QPEAK     TPEAK    R.V.
05884>                            (ha)     (cms)     (hrs)     (mm)
05885>      TOTAL HYD.(ID= 1):   4.11      1.44      6.08    93.62
05886>      ================================================
05887>      ID= 2  (   2)    :   3.64      0.85      6.08    93.62
05888>      ID= 3  (   2)    :   0.47      0.59      6.08    93.62
05889>      ID= 4  (   2)    :   0.00      0.00      0.00     0.00
05890>      ID= 5  (   2)    :   0.00      0.00      0.00     0.00
05891>      ID= 6  (   2)    :   0.00      0.00      0.00     0.00
05892> --------------------------------------------------------------------------------
05893>
05894> --------------------
05895> | ADD HYD  (******)|
05896> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
05897> --------------------          (ha)    (cms)    (hrs)      (mm)
05898>         ID1= 1 (******):     0.00   0.000     6.67    74.29
05899>       + ID2= 2 (******):     3.64   0.847     6.08    93.62
05900>         ================================================
05901>         ID = 3 (******):     3.64   0.847     6.08    93.62
05902>
05903>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05904> --------------------------------------------------------------------------------
05905> --------------------
05906> | DIVERTHYD(******)|
05907> | IN= 1   # OUT= 5 |
05908> --------------------
05909>      Outflow / Inflow  Relationships
05910>
05911>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05912>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05913>        0.00     0.00     0.00     0.00     0.00     0.00
05914>        0.00     5.20     0.00     0.00     0.00     5.20
05915>        1.00     5.20     0.00     0.00     0.00     6.20
05916>      100.00     5.20     0.00     0.00     0.00   105.20
05917>
05918>                            AREA     QPEAK     TPEAK    R.V.
05919>                            (ha)     (cms)     (hrs)     (mm)
05920>      TOTAL HYD.(ID= 1):   3.64      0.85      6.08    93.62
05921>      ================================================
05922>      ID= 2  (   2)    :   0.00      0.00      6.08    93.62
05923>      ID= 3  (   2)    :   3.64      0.85      6.08    93.62
05924>      ID= 4  (   2)    :   0.00      0.00      0.00     0.00
05925>      ID= 5  (   2)    :   0.00      0.00      0.00     0.00
05926>      ID= 6  (   2)    :   0.00      0.00      0.00     0.00
05927> --------------------------------------------------------------------------------
05928>
05929> --------------------
05930> | ADD HYD  (******)|
05931> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
05932> --------------------          (ha)    (cms)    (hrs)      (mm)
05933>         ID1= 1 (******):    22.59   3.226     6.67    74.29
05934>       + ID2= 2 (******):     0.00   0.000     6.08    93.62
05935>         ================================================
05936>         ID = 3 (******):    22.59   3.226     6.67    74.29
05937>
05938>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
05939> --------------------------------------------------------------------------------
05940> --------------------
05941> | DIVERTHYD(******)|
05942> | IN= 1   # OUT= 5 |
05943> --------------------
05944>      Outflow / Inflow  Relationships
05945>
05946>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05947>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05948>        0.00     0.00     0.00     0.00     0.00     0.00
05949>        1.00     0.00     0.00     0.00     0.00     1.00
05950>      100.00     0.00     0.00     0.00     0.00   100.00
05951>
05952>                            AREA     QPEAK     TPEAK    R.V.
05953>                            (ha)     (cms)     (hrs)     (mm)
05954>      TOTAL HYD.(ID= 1):  22.59      3.23      6.67    74.29
05955>      ================================================
05956>      ID= 2  (   2)    :  22.59      3.23      6.67    74.29
05957>      ID= 3  (   2)    :   0.00      0.00      6.67    74.29
05958>      ID= 4  (   2)    :   0.00      0.00      0.00     0.00
05959>      ID= 5  (   2)    :   0.00      0.00      0.00     0.00
05960>      ID= 6  (   2)    :   0.00      0.00      0.00     0.00
05961> --------------------------------------------------------------------------------
05962> --------------------
05963> | DIVERTHYD(******)|
05964> | IN= 1   # OUT= 5 |
05965> --------------------
05966>      Outflow / Inflow  Relationships
05967>
05968>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
05969>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
05970>        0.00     0.00     0.00     0.00     0.00     0.00
05971>        0.00     0.00     0.00     0.00     0.00     0.00
05972>        0.01     0.00     0.00     0.00     0.00     0.01
05973>        0.06     0.00     0.00     0.00     0.00     0.06
05974>        0.08     0.00     0.00     0.00     0.00     0.08
05975>        0.12     0.00     0.00     0.00     0.00     0.12
05976>        0.20     0.00     0.00     0.00     0.00     0.20
05977>        0.25     0.00     0.00     0.00     0.00     0.25
05978>        0.30     0.00     0.00     0.00     0.00     0.30
05979>        0.33     0.00     0.00     0.00     0.00     0.33
05980>        0.37     0.00     0.00     0.00     0.00     0.37
05981>        0.39     0.00     0.00     0.00     0.00     0.39
05982>        0.42     1.43     0.00     0.00     0.00     1.85
05983>        0.44     8.83     0.00     0.00     0.00     9.27
05984>        0.47    25.03     0.00     0.00     0.00    25.50
05985>        0.49    52.11     0.00     0.00     0.00    52.61
05986>        0.52    91.81     0.00     0.00     0.00    92.33
05987>        0.53   126.04     0.00     0.00     0.00   126.57
05988>
05989>                            AREA     QPEAK     TPEAK    R.V.
05990>                            (ha)     (cms)     (hrs)     (mm)
05991>      TOTAL HYD.(ID= 1):   22.59      3.23      6.67    74.29
05992>      ================================================
05993>      ID= 2  (   2)    :   6.73      0.42      6.67    74.29
05994>      ID= 3  (   2)    :  15.86      2.80      6.67    74.29
05995>      ID= 4  (   2)    :   0.00      0.00      0.00     0.00
05996>      ID= 5  (   2)    :   0.00      0.00      0.00     0.00
05997>      ID= 6  (   2)    :   0.00      0.00      0.00     0.00
05998> --------------------------------------------------------------------------------
05999> --------------------
06000> | CALIB            |
06001> | STANDHYD (******)|   Area    (ha)=   0.82
06002> |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
06003> --------------------
06004>                              IMPERVIOUS    PERVIOUS (i)
06005>      Surface Area     (ha)=       0.81         0.01
06006>      Dep. Storage     (mm)=       2.00         4.48
06007>      Average Slope     (%)=       0.50         1.00
06008>      Length            (m)=      18.40         0.10
06009>      Mannings n            =      0.013        0.030
06010>
06011>      Max.Eff.Inten.(mm/hr)=     135.12       108.03
06012>                   over (min)        5.00         5.00
06013>      Storage Coeff.  (min)=       1.01 (ii)    1.02 (ii)
06014>      Unit Hyd. Tpeak (min)=       5.00         5.00
06015>      Unit Hyd. peak  (cms)=       0.34         0.34
06016>                                                          *TOTALS*
06017>      PEAK FLOW       (cms)=       0.30         0.00          0.307 (iii)
06018>      TIME TO PEAK    (hrs)=       6.08         6.08           6.08
06019>      RUNOFF VOLUME    (mm)=     100.36        67.14         100.03
06020>      TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
06021>      RUNOFF COEFFICIENT   =       0.98         0.66           0.98
06022>
06023> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
06024>
06025>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06026>             CN*  =  85.0    Ia = Dep. Storage  (Above)
06027>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06028>            THAN THE STORAGE COEFFICIENT.
06029>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06030>
06031> --------------------------------------------------------------------------------
06032>
06033> --------------------
06034> | ADD HYD  (******)|
06035> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
06036> --------------------          (ha)    (cms)    (hrs)      (mm)
06037>         ID1= 1 (******):     0.82   0.307     6.08   100.03
06038>       + ID2= 2 (******):     0.00   0.000     6.67    74.29
06039>         ================================================
06040>         ID = 3 (******):     0.82   0.307     6.08   100.02
06041>
06042>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06043> --------------------------------------------------------------------------------
06044>
06045> --------------------
06046> | ADD HYD  (******)|
06047> |   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
06048> --------------------          (ha)    (cms)    (hrs)      (mm)
06049>         ID1= 3 (******):     0.82   0.307     6.08   100.02
06050>       + ID2= 2 (******):    15.86   2.804     6.67    74.29
06051>         ================================================
06052>         ID = 1 (******):    16.68   2.839     6.58    75.55
06053>
06054>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06055> --------------------------------------------------------------------------------
06056> --------------------
06057> | DIVERTHYD(******)|
06058> | IN= 1   # OUT= 5 |
06059> --------------------
06060>      Outflow / Inflow  Relationships
06061>
06062>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
06063>       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
06064>        0.00     0.00     0.00     0.00     0.00     0.00
06065>        0.00     0.00     0.00     0.00     0.00     0.00
06066>        0.03     0.00     0.00     0.00     0.00     0.03
06067>        0.04     0.00     0.00     0.00     0.00     0.04
06068>        0.09     0.00     0.00     0.00     0.00     0.09
06069>        0.12     0.00     0.00     0.00     0.00     0.13
06070>        0.20     0.00     0.00     0.00     0.00     0.20
06071>        0.30     0.00     0.00     0.00     0.00     0.30
06072>        0.37     0.00     0.00     0.00     0.00     0.37
06073>        0.43     0.00     0.00     0.00     0.00     0.43
06074>        0.48     0.00     0.00     0.00     0.00     0.48
06075>        0.52     0.00     0.00     0.00     0.00     0.52
06076>        0.57     0.00     0.00     0.00     0.00     0.57
06077>        0.67     0.00     0.00     0.00     0.00     0.67
06078>        0.68     0.00     0.00     0.00     0.00     0.68
06079>        0.68     0.02     0.00     0.00     0.00     0.70
06080>        0.72     0.56     0.00     0.00     0.00     1.28
06081>        0.73     0.75     0.01     0.00     0.00     1.48
06082>        1.10     1.87     0.54     0.00     0.00     3.51
06083>        1.40     2.25     2.61     0.00     0.00     6.26
06084>
06085>                            AREA     QPEAK     TPEAK    R.V.
06086>                            (ha)     (cms)     (hrs)     (mm)
06087>      TOTAL HYD.(ID= 1):  16.68      2.84      6.58    75.55
06088>      ================================================
06089>      ID= 2  (   3)    :   8.17      0.98      6.58    75.55
06090>      ID= 3  (   3)    :   7.27      1.50      6.58    75.55
06091>      ID= 4  (   3)    :   1.25      0.36      6.58    75.55
06092>      ID= 5  (   3)    :   0.00      0.00      0.00     0.00
06093>      ID= 6  (   3)    :   0.00      0.00      0.00     0.00
06094> --------------------------------------------------------------------------------
06095>
06096> --------------------
06097> | ADD HYD  (******)|
06098> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
06099> --------------------          (ha)    (cms)    (hrs)      (mm)
06100>         ID1= 1 (******):     6.73   0.422     6.67    74.29
06101>       + ID2= 2 (******):     8.17   0.978     6.58    75.55
06102>         ================================================
06103>         ID = 3 (******):    14.90   1.401     6.58    74.98
06104>
06105>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06106> --------------------------------------------------------------------------------
06107> --------------------
06108> | CALIB            |
06109> | STANDHYD (******)|   Area    (ha)=   8.58
06110> |ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
06111> --------------------
06112>                              IMPERVIOUS    PERVIOUS (i)
06113>      Surface Area     (ha)=       4.98         3.60
06114>      Dep. Storage     (mm)=       2.00         4.48
06115>      Average Slope     (%)=       0.91         1.12
06116>      Length            (m)=     246.54       157.18
06117>      Mannings n            =      0.015        0.300
06118>
06119>      Max.Eff.Inten.(mm/hr)=     135.12        74.92
06120>                   over (min)        5.00        30.00
```

```
      Storage Coeff.  (min)=       4.36 (ii)   28.27 (ii)
      Unit Hyd. Tpeak (min)=       5.00        30.00
      Unit Hyd. peak  (cms)=       0.23         0.04
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.83         0.43         2.062 (iii)
      TIME TO PEAK    (hrs)=       6.08         6.42         6.08
      RUNOFF VOLUME    (mm)=     100.36        67.13        86.40
      TOTAL RAINFALL   (mm)=     102.36       102.36       102.36
      RUNOFF COEFFICIENT   =       0.98         0.66         0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     8.58   2.062     6.08    86.40
      + ID2= 2 (******):   186.17  23.553     6.33    82.02
        ================================================
        ID = 3 ( 50650):   194.75  24.265     6.33    82.21

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50650):   194.75  24.265     6.33    82.21
      + ID2= 2 (******):    14.90   1.401     6.58    74.98
        ================================================
        ID = 1 ( 50650):   209.65  25.583     6.33    81.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        129.45        0.0450
                    6.00        129.24        0.0450
                    8.00        128.92        0.0450
                   10.00        128.26        0.0450
                   12.00        127.37        0.0450
                   14.00        126.79        0.0450
                   16.00        126.20        0.0450
                   18.00        125.80        0.0450
                   21.00        125.29        0.0450
                   24.00        124.85        0.0450
                   27.00        124.54        0.0350      Main Channel
                   30.00        124.62        0.0350      Main Channel
                   33.00        124.84    0.0350 /0.0450  Main Channel
                   36.00        125.26        0.0450
                   39.00        125.86        0.0450
                   42.00        126.49        0.0450
                   48.00        128.97        0.0450
                   54.00        129.42        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.26    124.80    .390E+03       0.9         0.76       7.18
        0.51    125.06    .124E+04       4.9         1.29       4.21
        0.77    125.31    .239E+04      12.3         1.67       3.25
        1.03    125.57    .380E+04      23.2         1.99       2.73
        1.28    125.83    .544E+04      37.9         2.27       2.40
        1.54    126.08    .731E+04      56.6         2.52       2.15
        1.80    126.34    .937E+04      79.6         2.77       1.96
        2.05    126.60    .116E+05     107.2         3.01       1.81
        2.31    126.85    .140E+05     139.3         3.25       1.67
        2.57    127.11    .165E+05     175.4         3.47       1.57
        2.82    127.37    .191E+05     215.7         3.68       1.48
        3.08    127.62    .219E+05     261.1         3.89       1.39
        3.34    127.88    .247E+05     310.7         4.10       1.32
        3.59    128.14    .276E+05     364.3         4.30       1.26
        3.85    128.40    .307E+05     421.6         4.48       1.21
        4.11    128.65    .338E+05     482.7         4.65       1.17
        4.36    128.91    .371E+05     548.1         4.82       1.13
        4.62    129.17    .406E+05     600.9         4.83       1.13
        4.88    129.42    .446E+05     634.1         4.63       1.17

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50650)  209.65    25.58    6.33  81.70      1.07      2.03
   OUTFLOW: ID= 1 ( 60650)  209.65    25.49    6.33  81.70      1.07      2.03

--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.06         13.71
     Dep. Storage     (mm)=       2.00          6.10
     Average Slope     (%)=       1.50          1.50
     Length            (m)=     581.73         82.00
     Mannings n           =      0.015         0.280

     Max.Eff.Inten.(mm/hr)=     135.12         94.56
                   over (min)      5.00         20.00
     Storage Coeff.  (min)=       6.29 (ii)   19.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00         20.00
     Unit Hyd. peak  (cms)=       0.19          0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=      12.88          1.88        14.222 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.25         6.08
     RUNOFF VOLUME    (mm)=     100.36         58.31        88.59
     TOTAL RAINFALL   (mm)=     102.36        102.36       102.36
     RUNOFF COEFFICIENT   =       0.98          0.57         0.87

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40670):    50.76  14.222     6.08    88.59
      + ID2= 2 ( 60650):   209.65  25.491     6.33    81.70
        ================================================
        ID = 3 ( 50670):   260.41  30.198     6.33    83.04

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00        115.77        0.0450
                  20.00        115.51        0.0450
                  24.00        114.73        0.0450
                  28.00        113.17    0.0450 /0.0350  Main Channel
                  32.00        113.16    0.0350 /0.0450  Main Channel
                  36.00        114.68        0.0450
                  40.00        115.05        0.0450
                  44.00        115.27        0.0450
                  48.00        115.46        0.0450
                  52.00        115.71        0.0450
                  54.00        115.77        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)       (m/s)      (min)
        0.14    113.30    .275E+03       0.3         0.60      13.60
        0.27    113.43    .612E+03       1.2         0.93       8.76
        0.41    113.57    .996E+03       2.4         1.18       6.88
        0.55    113.71    .143E+04       4.1         1.39       5.85
        0.69    113.84    .191E+04       6.1         1.57       5.18
        0.82    113.98    .244E+04       8.6         1.73       4.70
        0.96    114.12    .301E+04      11.6         1.87       4.34
        1.10    114.26    .363E+04      14.9         2.00       4.06
        1.24    114.39    .430E+04      18.8         2.12       3.82
        1.37    114.53    .502E+04      23.1         2.24       3.63
        1.51    114.67    .579E+04      27.9         2.34       3.46
        1.65    114.81    .664E+04      32.5         2.38       3.41
        1.78    114.94    .763E+04      37.8         2.41       3.36
        1.92    115.08    .878E+04      44.0         2.44       3.33
        2.06    115.22    .101E+05      50.8         2.45       3.31
        2.20    115.35    .117E+05      58.8         2.46       3.30
        2.33    115.49    .134E+05      68.1         2.47       3.29
        2.47    115.63    .157E+05      74.2         2.30       3.53
        2.61    115.77    .188E+05      85.0         2.20       3.69

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50670)  260.41    30.20    6.33  83.04      1.58      2.36
   OUTFLOW: ID= 1 ( 60670)  260.41    29.64    6.33  83.04      1.56      2.36

--------------------
| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.22          4.63
     Dep. Storage     (mm)=       2.00          8.04
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     269.03         47.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     135.12        102.91
                   over (min)      5.00         15.00
     Storage Coeff.  (min)=       3.48 (ii)   12.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.26          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.23          0.83         2.960 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17         6.08
     RUNOFF VOLUME    (mm)=     100.36         58.85        81.73
     TOTAL RAINFALL   (mm)=     102.36        102.36       102.36
     RUNOFF COEFFICIENT   =       0.98          0.57         0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.7    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40700):    10.86   2.960     6.08    81.73
      + ID2= 2 ( 60670):   260.41  29.638     6.33    83.04
        ================================================
        ID = 3 ( 50680):   271.26  30.560     6.33    82.99

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50          0.69
     Dep. Storage     (mm)=       2.00          7.98
     Average Slope     (%)=       0.60          0.60
     Length            (m)=      89.27         69.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     135.12         79.20
                   over (min)      5.00         25.00
     Storage Coeff.  (min)=       2.69 (ii)   21.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00         25.00
     Unit Hyd. peak  (cms)=       0.29          0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.17          0.09         0.228 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.33         6.08
     RUNOFF VOLUME    (mm)=     100.36         57.96        74.45
     TOTAL RAINFALL   (mm)=     102.36        102.36       102.36
     RUNOFF COEFFICIENT   =       0.98          0.57         0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       7.93         17.56
     Dep. Storage     (mm)=       2.00          8.01
     Average Slope     (%)=       3.10          3.10
     Length            (m)=     412.26         40.00
     Mannings n           =      0.015         0.350

     Max.Eff.Inten.(mm/hr)=     135.12         97.93
                   over (min)      5.00         15.00
     Storage Coeff.  (min)=       4.11 (ii)   11.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.24          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.59          3.06         5.282 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17         6.08
     RUNOFF VOLUME    (mm)=     100.36         55.87        68.10
     TOTAL RAINFALL   (mm)=     102.36        102.36       102.36
     RUNOFF COEFFICIENT   =       0.98          0.55         0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  78.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

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---------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20   0.228     6.08    74.45
      + ID2= 2 ( 40690):    25.49   5.282     6.08    68.10
        ==================================================
        ID = 3 ( 50690):    26.69   5.510     6.08    68.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

---------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   271.26  30.560     6.33    82.99
      + ID2= 2 ( 50690):    26.69   5.510     6.08    68.39
        ==================================================
        ID = 3 ( 50700):   297.95  33.209     6.33    81.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         109.54        0.0450
                   4.00         108.85        0.0450
                   8.00         108.76        0.0450
                  12.00         108.31        0.0450
                  16.00         107.44        0.0450
                  20.00         107.22        0.0450
                  24.00         107.06        0.0450
                  28.00         107.10        0.0450
                  32.00         107.04        0.0450
                  36.00         106.98        0.0450
                  40.00         106.83        0.0350      Main Channel
                  44.00         106.49        0.0350      Main Channel
                  48.00         106.92    0.0350 /0.0450  Main Channel
                  52.00         107.19        0.0450
                  56.00         107.11        0.0450
                  60.00         107.14        0.0450
                  64.00         107.27        0.0450
                  68.00         107.71        0.0450
                  72.00         108.37        0.0450
                  80.00         109.55        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.12   106.60    .128E+03       0.1         0.43      35.47
       0.23   106.72    .513E+03       0.4         0.69      22.34
       0.35   106.83    .115E+04       1.1         0.90      17.05
       0.52   107.00    .277E+04       3.6         1.21      12.69
       0.69   107.17    .675E+04       8.9         1.21      12.64
       0.86   107.34    .135E+05      19.9         1.35      11.35
       1.02   107.51    .211E+05      36.3         1.58       9.70
       1.19   107.68    .291E+05      57.8         1.82       8.39
       1.36   107.85    .375E+05      84.0         2.06       7.43
       1.53   108.02    .461E+05     114.5         2.28       6.71
       1.70   108.19    .550E+05     149.1         2.49       6.15
       1.87   108.35    .642E+05     187.4         2.68       5.71
       2.04   108.52    .737E+05     228.8         2.85       5.37
       2.21   108.69    .837E+05     274.1         3.01       5.09
       2.37   108.86    .942E+05     316.2         3.08       4.97
       2.54   109.03    .105E+06     372.6         3.25       4.72
       2.71   109.20    .117E+06     433.4         3.40       4.50
       2.88   109.37    .129E+06     498.6         3.55       4.31
       3.05   109.54    .141E+06     568.2         3.70       4.14

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  297.95    33.21    6.33  81.68      0.99      1.53
   OUTFLOW: ID= 1 ( 60700)  297.95    31.86    6.42  81.68      0.98      1.51


--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.57         4.79
     Dep. Storage     (mm)=       2.00         8.94
     Average Slope     (%)=       3.90         3.90
     Length            (m)=     205.82        41.00
     Mannings n           =      0.015        0.360

     Max.Eff.Inten.(mm/hr)=     135.12        99.34
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       2.53 (ii)    9.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.49         0.95          1.447 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        56.38          65.51
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.55           0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.5    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35   1.447     6.08    65.51
      + ID2= 2 ( 60700):   297.95  31.857     6.42    81.68
        ==================================================
        ID = 3 ( 50710):   304.31  32.281     6.42    81.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.12         3.92
     Dep. Storage     (mm)=       2.00         5.64
     Average Slope     (%)=       3.00         3.00
     Length            (m)=     408.55        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     135.12       101.93
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.13 (ii)    7.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.24         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       7.73         0.91          8.634 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        59.67          93.71
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.58           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  80.1    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| RESERVOIR( 70150)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                            0.0000      0.0000  |    0.7080      1.0040
                            0.2890      0.3890  |    0.7750      1.0700
                            0.3270      0.4500  |    0.9210      1.2580
                            0.3600      0.6030  |    1.0000      1.3280
                            0.3900      0.6540  |    1.0820      1.3980
                            0.4190      0.7110  |    1.1670      1.4690
                            0.4450      0.7680  |    1.2550      1.5390
                            0.4700      0.8260  |    1.3460      1.6090
                            0.4960      0.8830  |    1.9470      1.9930
                            0.6450      0.9400  |    0.0000      0.0000

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40720)     25.037     8.634      6.08       93.71
   OUTFLOW: ID= 1 ( 70150)     25.037     1.060      6.58       93.70
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00        0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.28
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  1.3826

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  --------------------------
  | Junction Command(70151) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70150)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70151)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
---------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      10.76         3.40
     Dep. Storage     (mm)=       2.00         6.50
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     307.19        41.00
     Mannings n           =      0.015        0.290

     Max.Eff.Inten.(mm/hr)=     135.12        98.50
                   over (min)       5.00        10.00
     Storage Coeff.  (min)=       3.45 (ii)    7.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.95         0.75          4.700 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36        57.35          89.61
     TOTAL RAINFALL   (mm)=     102.36       102.36         102.36
     RUNOFF COEFFICIENT   =       0.98         0.56           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  79.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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---------------------
| RESERVOIR( 70160)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
---------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                            0.0000      0.0000  |    0.2230      0.3310
                            0.0580      0.0840  |    0.2500      0.3590
                            0.0780      0.1040  |    0.2790      0.3870
                            0.0930      0.1240  |    0.3090      0.4160
                            0.1060      0.1440  |    0.3750      0.4780
                            0.1180      0.1640  |    0.4110      0.5120
                            0.1280      0.1840  |    0.4470      0.5450
                            0.1590      0.2550  |    0.5250      0.6130
                            0.1770      0.2790  |    0.7390      0.9130
                            0.1990      0.3030  |    0.0000      0.0000

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40730)     14.155     4.700      6.08       89.61
   OUTFLOW: ID= 1 ( 70160)     14.155     0.610      6.58       89.58
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00        0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.97
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7332

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  --------------------------
  | Junction Command(70161) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70160)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70161)    0.00     0.00    0.00     0.00

  --------------------------------------------------------------------------------

---------------------
| ADD HYD  ( 50730)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50710):   304.31  32.281     6.42    81.34
      + ID2= 2 ( 70150):    25.04   1.060     6.58    93.70
        ==================================================
        ID = 3 ( 50730):   329.34  33.323     6.42    82.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

---------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
---------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70151 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50730):   329.34  33.323     6.42    82.28
      + ID2= 2 ( 70151):     0.00   0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50730):   329.34  33.323     6.42    82.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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---------------------
| ADD HYD  ( 50730)|
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```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50730):   329.34  33.323     6.42    82.28
     + ID2= 2 ( 70160):    14.15   0.610     6.58    89.58
       ===================================================
       ID = 3 ( 50730):   343.50  33.928     6.42    82.58

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50730)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70161 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50730):   343.50  33.928     6.42    82.58
     + ID2= 2 ( 70161):     0.00   0.000     0.00     0.00
       ===================================================
       ID = 1 ( 50730):   343.50  33.928     6.42    82.58

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60730)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         96.28        0.0450
                   9.00         95.39        0.0450
                  12.00         94.87        0.0450
                  15.00         94.17        0.0450
                  18.00         93.95        0.0450
                  21.00         94.01        0.0450
                  24.00         93.92        0.0450
                  27.00         93.98    0.0450 /0.0350  Main Channel
                  30.00         93.33        0.0350      Main Channel
                  32.00         93.73    0.0350 /0.0450  Main Channel
                  34.00         94.58        0.0450
                  35.00         95.06        0.0450
                  40.00         95.32        0.0450
                  45.00         96.12        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13    93.46    .164E+03       0.0         0.36       89.51
        0.26    93.60    .654E+03       0.2         0.57       56.39
        0.40    93.73    .147E+04       0.6         0.75       43.03
        0.55    93.88    .274E+04       1.4         0.99       32.63
        0.70    94.03    .550E+04       2.8         1.00       32.28
        0.85    94.18    .104E+05       5.8         1.08       29.94
        1.00    94.33    .159E+05      10.1         1.24       26.04
        1.15    94.48    .216E+05      15.6         1.41       22.97
        1.29    94.63    .275E+05      22.2         1.57       20.64
        1.44    94.78    .338E+05      29.9         1.72       18.84
        1.59    94.93    .404E+05      38.6         1.86       17.44
        1.74    95.08    .473E+05      48.0         1.97       16.40
        1.89    95.23    .549E+05      58.1         2.05       15.76
        2.04    95.38    .637E+05      70.1         2.14       15.14
        2.19    95.53    .731E+05      83.0         2.21       14.67
        2.34    95.68    .833E+05      97.5         2.27       14.23
        2.49    95.83    .941E+05     113.5         2.34       13.82
        2.64    95.98    .106E+06     131.2         2.41       13.42
        2.79    96.13    .118E+06     150.7         2.48       13.05

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50730)  343.50    33.93    6.42  82.58      1.51      1.78
   OUTFLOW: ID= 1 ( 60730)  343.50    29.38    6.67  82.58      1.43      1.70


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--------------------
| CALIB            |
| STANDHYD ( 40770)|   Area    (ha)=  69.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  80.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       56.24         13.19
     Dep. Storage     (mm)=        2.00          5.50
     Average Slope     (%)=        1.70          1.70
     Length            (m)=      680.34         43.00
     Mannings n           =       0.015         0.270

     Max.Eff.Inten.(mm/hr)=      135.12        101.90
                 over (min)         5.00         15.00
     Storage Coeff.  (min)=        6.65 (ii)    10.69 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.18          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       19.39          2.50        21.628 (iii)
     TIME TO PEAK    (hrs)=        6.08          6.17         6.08
     RUNOFF VOLUME    (mm)=      100.36         59.21        92.13
     TOTAL RAINFALL   (mm)=      102.36        102.36       102.36
     RUNOFF COEFFICIENT   =        0.98          0.58         0.90

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 70170)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    3.6700      4.7800
                          0.2600      1.6200   |    8.6400      6.0000
                          1.4500      2.7100   |    0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 40770)     69.429     21.628      6.08      92.13
   OUTFLOW: ID= 1 ( 70170)     69.429      2.922      6.67      92.11
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.51
                  TIME SHIFT OF PEAK FLOW          (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  4.0848

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  --------------------------
  | Junction Command(70171) |
  --------------------------

                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70170)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70171)    0.00     0.00    0.00     0.00

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--------------------
| ADD HYD  ( 50770)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 60730):   343.50  29.381     6.67    82.58
     + ID2= 2 ( 70171):    69.43   2.922     6.67    92.11
       ===================================================
       ID = 3 ( 50770):   412.93  32.303     6.67    84.18

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50770)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70171 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50770):   412.93  32.303     6.67    84.18
     + ID2= 2 ( 70171):     0.00   0.000     0.00     0.00
       ===================================================
       ID = 1 ( 50770):   412.93  32.303     6.67    84.18

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ROUTE CHN( 60770)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         92.38        0.0450
                   3.00         90.34        0.0450
                   6.00         89.94        0.0450
                   9.00         89.83        0.0450
                  12.00         89.80        0.0450
                  15.00         89.72        0.0450
                  18.00         89.58    0.0450 /0.0350  Main Channel
                  21.00         89.15        0.0350      Main Channel
                  24.00         89.82    0.0350 /0.0450  Main Channel
                  27.00         89.76        0.0450
                  30.00         89.78        0.0450
                  33.00         89.79        0.0450
                  36.00         89.80        0.0450
                  39.00         89.72        0.0450
                  42.00         90.35        0.0450
                  45.00         91.36        0.0450
                  48.00         92.10        0.0450
                  51.00         92.21        0.0450
                  54.00         92.34        0.0450
                  56.00         92.35        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15    89.29    .298E+02       0.0         0.31       13.27
        0.29    89.44    .119E+03       0.2         0.50        8.36
        0.44    89.58    .268E+03       0.7         0.65        6.38
        0.61    89.76    .588E+03       1.9         0.79        5.25
        0.78    89.93    .179E+04       5.1         0.71        5.86
        0.96    90.10    .329E+04      11.4         0.87        4.79
        1.13    90.27    .489E+04      20.2         1.03        4.03
        1.30    90.45    .656E+04      31.5         1.19        3.47
        1.47    90.62    .828E+04      45.0         1.35        3.06
        1.65    90.79    .100E+05      60.5         1.50        2.76
        1.82    90.97    .118E+05      77.9         1.64        2.53
        1.99    91.14    .136E+05      97.1         1.77        2.34
        2.17    91.31    .155E+05     118.1         1.90        2.18
        2.34    91.48    .173E+05     140.6         2.02        2.06
        2.51    91.66    .193E+05     164.7         2.13        1.95
        2.68    91.83    .212E+05     190.5         2.23        1.86
        2.86    92.00    .232E+05     218.0         2.33        1.78
        3.03    92.18    .253E+05     242.7         2.39        1.74
        3.20    92.35    .275E+05     262.6         2.37        1.75

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50770)  412.93    32.30    6.67  84.18      1.31      1.20
   OUTFLOW: ID= 1 ( 60770)  412.93    32.26    6.67  84.18      1.31      1.20


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40780)|   Area    (ha)=  24.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  50.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       12.78         11.79
     Dep. Storage     (mm)=        2.00          8.70
     Average Slope     (%)=        1.50          1.50
     Length            (m)=      404.74         43.00
     Mannings n           =       0.015         0.330

     Max.Eff.Inten.(mm/hr)=      135.12         96.11
                 over (min)         5.00         15.00
     Storage Coeff.  (min)=        5.06 (ii)    14.70 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.21          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        4.46          1.83         6.040 (iii)
     TIME TO PEAK    (hrs)=        6.08          6.17         6.08
     RUNOFF VOLUME    (mm)=      100.36         55.10        77.73
     TOTAL RAINFALL   (mm)=      102.36        102.36       102.36
     RUNOFF COEFFICIENT   =        0.98          0.54         0.76


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
|------------------|          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57   6.040     6.08    77.73
     + ID2= 2 ( 60770):   412.93  32.259     6.67    84.18
       ===================================================
       ID = 3 ( 50780):   437.50  33.366     6.67    83.82

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        5.38          2.81
     Dep. Storage     (mm)=        2.00          5.74
     Average Slope     (%)=        1.20          1.20
     Length            (m)=      233.56         52.00
     Mannings n           =       0.015         0.270

     Max.Eff.Inten.(mm/hr)=      135.12        105.97
                 over (min)         5.00         15.00
     Storage Coeff.  (min)=        3.89 (ii)    13.74 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.25          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.90          0.50         2.344 (iii)
     TIME TO PEAK    (hrs)=        6.08          6.17         6.08
     RUNOFF VOLUME    (mm)=      100.36         59.77        85.26
     TOTAL RAINFALL   (mm)=      102.36        102.36       102.36
     RUNOFF COEFFICIENT   =        0.98          0.58         0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.4    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66          0.49
     Dep. Storage     (mm)=       2.00          7.60
     Average Slope     (%)=       1.40          1.40
     Length            (m)=     185.29         48.00
     Mannings n           =      0.015         0.330

     Max.Eff.Inten.(mm/hr)=     135.12         93.87
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       3.23 (ii)     6.98 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.27          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.73          0.10          1.838 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.08           6.08
     RUNOFF VOLUME    (mm)=     100.36         55.25          95.94
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.98          0.54           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40790):     8.18   2.344     6.08    85.26
     + ID2= 2 ( 40800):     5.15   1.838     6.08    95.94
       ==========================================================
       ID = 3 ( 50795):    13.33   4.181     6.08    89.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000      0.0000   |    0.7780      0.6570
                         0.0040      0.0150   |    1.1550      0.7720
                         0.0090      0.0810   |    1.5780      0.8930
                         0.0120      0.1550   |    1.9240      0.9870
                         0.0140      0.2370   |    2.4190      1.1190
                         0.0160      0.3260   |    2.9510      1.2560
                         0.0620      0.3720   |    3.5980      1.3270
                         0.2560      0.4700   |    4.5570      1.3990
                         0.5310      0.5740   |    5.7230      1.4730

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332     4.181      6.08      89.38
   OUTFLOW: ID= 1 ( 70180)     13.332     0.914      6.33      89.31
   OVERFLOW:ID= 3 (  0003)      0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.87
                  TIME SHIFT OF PEAK FLOW         (min)= 15.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6993

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  | Junction Command(70181) |
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                           AREA     QPEAK   TPEAK     R.V.
                           (ha)     (cms)    (hrs)    (mm)
  INFLOW : ID= 3( 70180)    0.00     0.00    0.00     0.00
  OUTFLOW: ID= 2( 70181)    0.00     0.00    0.00     0.00

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--------------------
| CALIB             |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41          2.16
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     154.27         40.00
     Mannings n           =      0.013         0.250

     Max.Eff.Inten.(mm/hr)=     135.12        120.63
                   over (min)       5.00         10.00
     Storage Coeff.  (min)=       2.94 (ii)     9.49 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.28          0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.46          0.55          1.014 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.08           6.08
     RUNOFF VOLUME    (mm)=     101.36         71.54          81.89
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.99          0.70           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40805):     3.57   1.014     6.08    81.89
     + ID2= 2 ( 70180):    13.33   0.914     6.33    89.31
       ==========================================================
       ID = 3 ( 50790):    16.90   1.632     6.08    87.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
       ID1= 3 ( 50790):    16.90   1.632     6.08    87.74
     + ID2= 2 ( 70181):     0.00   0.000     0.00     0.00
       ==========================================================
       ID = 1 ( 50790):    16.90   1.632     6.08    87.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50780):   437.50  33.366     6.67    83.82
     + ID2= 2 ( 50790):    16.90   1.632     6.08    87.74
       ==========================================================
       ID = 3 ( 50800):   454.40  34.375     6.67    83.97

--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         88.54        0.0450
                    3.00         88.18        0.0450
                    6.00         87.54        0.0450
                    9.00         87.44        0.0450
                   12.00         87.13        0.0450
                   15.00         87.23        0.0450
                   18.00         87.18        0.0450
                   21.00         86.49    0.0450 /0.0350  Main Channel
                   24.00         85.82        0.0350      Main Channel
                   27.00         86.44    0.0350 /0.0450  Main Channel
                   30.00         87.18        0.0450
                   33.00         87.16        0.0450
                   36.00         87.25        0.0450
                   39.00         87.46        0.0450
                   42.00         87.70        0.0450
                   45.00         87.80        0.0450
                   48.00         88.00        0.0450
                   49.00         88.12        0.0450
                   50.00         88.23        0.0450
                   52.00         88.59        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12   85.95    .779E+02       0.0         0.37       48.75
        0.25   86.07    .312E+03       0.2         0.59       30.71
        0.37   86.19    .701E+03       0.5         0.77       23.44
        0.49   86.32    .125E+04       1.1         0.94       19.35
        0.62   86.44    .195E+04       1.9         1.09       16.67
        0.77   86.59    .299E+04       3.8         1.36       13.29
        0.92   86.74    .424E+04       6.2         1.59       11.42
        1.07   86.89    .570E+04       9.3         1.77       10.25
        1.22   87.04    .736E+04      13.0         1.92        9.44
        1.37   87.19    .938E+04      16.8         1.94        9.33
        1.52   87.34    .134E+05      22.9         1.86        9.74
        1.66   87.49    .182E+05      31.1         1.86        9.72
        1.81   87.64    .237E+05      41.6         1.91        9.51
        1.96   87.79    .298E+05      53.9         1.96        9.22
        2.11   87.94    .365E+05      68.9         2.05        8.84
        2.26   88.09    .437E+05      86.5         2.15        8.43
        2.41   88.24    .513E+05     106.2         2.25        8.04
        2.56   88.39    .592E+05     128.2         2.36        7.69
        2.71   88.54    .674E+05     152.5         2.46        7.36

                                        <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  454.40    34.38    6.67  83.97      1.71      1.88
   OUTFLOW: ID= 1 ( 60800)  454.40    32.67    6.83  83.97      1.68      1.87


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| CALIB             |
| STANDHYD ( 40820)|   Area    (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.98         11.23
     Dep. Storage     (mm)=       2.00          9.57
     Average Slope     (%)=       2.30          2.30
     Length            (m)=     307.74         44.00
     Mannings n           =      0.015         0.390

     Max.Eff.Inten.(mm/hr)=     135.12         92.58
                   over (min)       5.00         15.00
     Storage Coeff.  (min)=       3.77 (ii)    13.42 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.25          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.68          1.73          2.174 (iii)
     TIME TO PEAK    (hrs)=       6.08          6.17           6.08
     RUNOFF VOLUME    (mm)=     100.36         50.04          56.57
     TOTAL RAINFALL   (mm)=     102.36        102.36         102.36
     RUNOFF COEFFICIENT   =       0.98          0.49           0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  73.8    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40820):    14.21   2.174     6.08    56.57
     + ID2= 2 ( 60800):   454.40  32.666     6.83    83.97
       ==========================================================
       ID = 3 ( 50820):   468.61  33.130     6.83    83.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 50500):  1382.58  72.628     6.92    67.35
     + ID2= 2 ( 50820):   468.61  33.130     6.83    83.14
       ==========================================================
       ID = 3 ( 50830):  1851.19 105.312     6.83    71.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         82.12        0.0450
                   20.00         81.53        0.0450
                   24.00         81.26        0.0450
                   28.00         81.27        0.0450
                   32.00         80.34    0.0450 /0.0350  Main Channel
                   36.00         79.95        0.0350      Main Channel
                   40.00         80.78        0.0450
                   44.00         81.45        0.0450
                   48.00         81.53        0.0450
                   52.00         81.49        0.0450
                   56.00         81.51        0.0450
                   60.00         81.58        0.0450
                   64.00         81.58        0.0450
                   68.00         81.61        0.0450
                   72.00         81.75        0.0450
                   80.00         82.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   80.05    .555E+01       0.0         0.24       5.45
        0.19   80.14    .222E+02       0.1         0.38       3.43
        0.29   80.24    .499E+02       0.3         0.50       2.62
        0.39   80.34    .888E+02       0.7         0.60       2.16
        0.50   80.45    .146E+03       1.4         0.77       1.68
        0.62   80.57    .213E+03       2.5         0.91       1.43
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        0.73    80.68    .290E+03       3.8          1.02       1.27
        0.85    80.80    .375E+03       5.4          1.13       1.15
        0.96    80.91    .471E+03       7.6          1.26       1.03
        1.08    81.03    .578E+03      10.1          1.37       0.95
        1.19    81.14    .695E+03      13.0          1.46       0.89
        1.31    81.26    .823E+03      16.2          1.53       0.85
        1.43    81.37    .100E+04      19.7          1.53       0.85
        1.54    81.49    .121E+04      24.1          1.56       0.84
        1.66    81.60    .155E+04      29.0          1.46       0.89
        1.77    81.72    .204E+04      36.4          1.39       0.93
        1.89    81.84    .259E+04      45.6          1.38       0.95
        2.00    81.95    .320E+04      56.7          1.38       0.94
        2.12    82.07    .387E+04      69.6          1.40       0.93

     **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                      <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 1851.19   105.31    6.83  71.34      2.12      1.40
   OUTFLOW: ID= 1 ( 60830) 1851.19   105.27    6.92  71.34      2.12      1.40



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40830)|   Area    (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      30.36        15.15
     Dep. Storage     (mm)=       2.00         5.54
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     550.83        40.00
     Mannings n           =      0.015        0.270

     Max.Eff.Inten.(mm/hr)=     135.12       146.98
                   over (min)      5.00        15.00
     Storage Coeff.  (min)=       6.35 (ii)   13.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.19         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       8.56         3.84      11.962 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17        6.08
     RUNOFF VOLUME    (mm)=     100.36        65.35       84.06
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.64        0.82


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  78.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         1.59
     Dep. Storage     (mm)=       2.00         9.61
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     116.69        69.00
     Mannings n           =      0.015        0.370

     Max.Eff.Inten.(mm/hr)=     135.12        89.71
                   over (min)      5.00        15.00
     Storage Coeff.  (min)=       1.91 (ii)   13.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.32         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.25        0.331 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.17        6.08
     RUNOFF VOLUME    (mm)=     100.36        51.59       58.63
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.50        0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  75.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51  11.962     6.08    84.06
      + ID2= 2 ( 40840):     2.04   0.331     6.08    58.63
        ================================================
        ID = 3 ( 50840):    47.56  12.293     6.08    82.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56  12.293     6.08    82.97
      + ID2= 2 ( 60830):  1851.19 105.274     6.92    71.34
        ================================================
        ID = 1 ( 50840):  1898.74 106.715     6.83    71.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         82.18        0.0450
                 32.00         79.04        0.0450
                 40.00         78.76        0.0450
                 48.00         78.58        0.0450
                 56.00         78.21        0.0450
                 64.00         76.89        0.0350      Main Channel
                 72.00         78.08        0.0450
                 80.00         79.44        0.0450
                 88.00         80.28        0.0450
                 96.00         80.92        0.0450
                104.00         81.29        0.0450
                112.00         81.62        0.0450
                120.00         81.76        0.0450
                128.00         81.81        0.0450
                140.00         82.02        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27    77.16    .320E+03       0.2          0.48       24.00
        0.54    77.43    .128E+04       1.4          0.75       15.12
        0.81    77.70    .288E+04       4.2          0.99       11.54
        1.08    77.97    .512E+04       9.0          1.20        9.53
        1.35    78.24    .799E+04      16.6          1.42        8.02
        1.62    78.51    .119E+05      26.9          1.54        7.40
        1.89    78.78    .176E+05      41.0          1.59        7.15
        2.16    79.05    .252E+05      62.9          1.71        6.68
        2.43    79.32    .341E+05      93.9          1.89        6.05
        2.70    79.59    .438E+05     131.1          2.05        5.56
        2.97    79.86    .544E+05     175.1          2.20        5.18
        3.24    80.13    .660E+05     226.4          2.35        4.86
        3.51    80.40    .787E+05     284.9          2.48        4.60
        3.77    80.67    .924E+05     351.1          2.60        4.39
        4.04    80.94    .107E+06     425.7          2.72        4.20
        4.31    81.21    .124E+06     507.1          2.81        4.06
        4.58    81.48    .141E+06     598.4          2.90        3.94
        4.85    81.75    .161E+06     695.9          2.96        3.86
        5.12    82.02    .185E+06     800.9          2.97        3.85

                                      <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 1898.74   106.71    6.83  71.63      2.52      1.94
   OUTFLOW: ID= 1 ( 60840) 1898.74   106.13    6.92  71.63      2.52      1.94



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--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14        18.19
     Dep. Storage     (mm)=       2.00         7.29
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     418.93       142.00
     Mannings n           =      0.015        0.310

     Max.Eff.Inten.(mm/hr)=     135.12        78.94
                   over (min)      5.00        25.00
     Storage Coeff.  (min)=       4.74 (ii)   23.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.22         0.05
                                                      *TOTALS*
     PEAK FLOW       (cms)=       2.37         2.21        3.693 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.33        6.08
     RUNOFF VOLUME    (mm)=     100.36        56.13       67.02
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.55        0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  77.5    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33   3.693     6.08    67.02
      + ID2= 2 ( 60840):  1898.74 106.134     6.92    71.63
        ================================================
        ID = 3 ( 50850):  1925.07 107.330     6.92    71.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77        35.37
     Dep. Storage     (mm)=       2.00         8.79
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     611.77       120.00
     Mannings n           =      0.015        0.330

     Max.Eff.Inten.(mm/hr)=     135.12        67.11
                   over (min)      5.00        30.00
     Storage Coeff.  (min)=       6.76 (ii)   28.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.18         0.04
                                                      *TOTALS*
     PEAK FLOW       (cms)=       6.64         3.75        8.567 (iii)
     TIME TO PEAK    (hrs)=       6.08         6.42        6.08
     RUNOFF VOLUME    (mm)=     100.36        56.97       71.72
     TOTAL RAINFALL   (mm)=     102.36       102.36      102.36
     RUNOFF COEFFICIENT   =       0.98         0.56        0.70


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  79.9    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60880)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         85.55        0.0450
                 24.00         85.23        0.0450
                 28.00         85.17        0.0450
                 32.00         85.07        0.0450
                 36.00         84.96        0.0350      Main Channel
                 40.00         84.96        0.0350      Main Channel
                 44.00         85.00    0.0350 /0.0450  Main Channel
                 48.00         85.03        0.0450
                 52.00         85.18        0.0450
                 56.00         85.22        0.0450
                 60.00         85.31        0.0450
                 64.00         85.33        0.0450
                 68.00         85.38        0.0450
                 80.00         85.59        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.01    84.96    .992E+01       0.0          0.05      238.32
        0.04    84.99    .159E+03       0.0          0.21       57.53
        0.07    85.03    .408E+03       0.2          0.32       38.32
        0.10    85.06    .751E+03       0.4          0.40       30.54
        0.13    85.09    .114E+04       0.7          0.47       25.77
        0.16    85.12    .158E+04       1.2          0.53       22.66
        0.19    85.15    .206E+04       1.7          0.59       20.45
        0.22    85.18    .259E+04       2.3          0.64       18.91
        0.25    85.21    .321E+04       3.0          0.67       18.12
        0.29    85.24    .393E+04       3.8          0.70       17.32
        0.32    85.27    .473E+04       4.8          0.73       16.56
        0.35    85.30    .562E+04       5.9          0.76       15.89
        0.38    85.34    .663E+04       7.0          0.77       15.69
        0.41    85.37    .777E+04       8.5          0.80       15.20
        0.44    85.40    .902E+04      10.2          0.82       14.69
        0.47    85.43    .104E+05      12.2          0.85       14.19
        0.50    85.46    .118E+05      14.3          0.88       13.73
        0.53    85.49    .133E+05      16.7          0.91       13.31
        0.56    85.52    .150E+05      19.3          0.94       12.91

                                      <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40880)   56.14     8.57    6.08  71.72      0.41      0.80
   OUTFLOW: ID= 1 ( 60880)   56.14     5.72    6.17  71.70      0.34      0.76



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--------------------
| ROUTEPIPE( 80880)|     PIPE Number     =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)=1900.00
| DT=  5.0 min     |     Length       (m)= 888.03
--------------------     Slope      (m/m)=  0.004
                         Manning n       =  0.013
```

<-------------- TRAVEL TIME TABLE ---------->

DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min
0.10	.213E+03	0.2	0.93	15.91
0.20	.426E+03	0.7	1.41	10.53
0.30	.639E+03	1.3	1.76	8.42
0.40	.853E+03	2.0	2.04	7.25
0.50	.107E+04	2.7	2.27	6.51
0.60	.128E+04	3.6	2.47	5.99
0.70	.149E+04	4.4	2.64	5.60
0.80	.171E+04	5.4	2.79	5.30
0.90	.192E+04	6.3	2.92	5.06
1.00	.213E+04	7.3	3.04	4.87
1.10	.234E+04	8.3	3.15	4.71
1.20	.256E+04	9.3	3.24	4.57
1.30	.277E+04	10.4	3.33	4.45
1.40	.298E+04	11.4	3.40	4.35
1.50	.320E+04	12.5	3.48	4.26
1.60	.341E+04	13.6	3.54	4.18
1.70	.362E+04	14.7	3.60	4.11
1.80	.384E+04	15.8	3.66	4.05
1.90	.405E+04	16.9	3.71	3.99

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (60880)	56.14	5.72	6.17	71.70	0.84	2.84
OUTFLOW: ID= 1 (80880)	56.14	5.56	6.33	71.70	0.82	2.82

CALIB / STANDHYD (40890) / ID= 1 DT= 5.0 min	Area (ha)= 41.71	Total Imp(%)= 43.73	Dir. Conn.(%)= 32.85

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	18.24	23.47	
Dep. Storage	(mm)=	2.00	8.20	
Average Slope	(%)=	1.10	1.10	
Length	(m)=	527.32	85.00	
Mannings n	=	0.015	0.350	
Max.Eff.Inten.	(mm/hr)=	135.12	85.42	
over	(min)	5.00	25.00	
Storage Coeff.	(min)=	6.50 (ii)	23.80 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	25.00	
Unit Hyd. peak	(cms)=	0.18	0.05	
				TOTALS
PEAK FLOW	(cms)=	4.80	3.07	6.641 (iii)
TIME TO PEAK	(hrs)=	6.08	6.33	6.08
RUNOFF VOLUME	(mm)=	100.36	55.52	70.25
TOTAL RAINFALL	(mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT	=	0.98	0.54	0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB / STANDHYD (40900) / ID= 1 DT= 5.0 min	Area (ha)= 13.56	Total Imp(%)= 62.00	Dir. Conn.(%)= 48.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	8.41	5.15	
Dep. Storage	(mm)=	1.00	7.00	
Average Slope	(%)=	1.00	2.00	
Length	(m)=	300.67	43.00	
Mannings n	=	0.015	0.310	
Max.Eff.Inten.	(mm/hr)=	135.12	141.11	
over	(min)	5.00	15.00	
Storage Coeff.	(min)=	4.78 (ii)	12.08 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	15.00	
Unit Hyd. peak	(cms)=	0.22	0.09	
				TOTALS
PEAK FLOW	(cms)=	2.37	1.31	3.536 (iii)
TIME TO PEAK	(hrs)=	6.08	6.17	6.08
RUNOFF VOLUME	(mm)=	101.36	63.43	81.64
TOTAL RAINFALL	(mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT	=	0.99	0.62	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

DUHYD (90020) / Inlet Cap.= 0.960 / #of Inlets= 1 / Total(cms)= 1.0	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
TOTAL HYD.(ID= 1):	13.56	3.54	6.08	81.64
MAJOR SYS.(ID= 2):	3.32	2.58	6.08	81.64
MINOR SYS.(ID= 3):	10.24	0.96	5.75	81.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50890)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40890):	41.71	6.641	6.08	70.25
+ ID2= 2 (50850):	1925.07	107.330	6.92	71.57
ID = 3 (50890):	1966.78	109.128	6.92	71.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50890)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (50890):	1966.78	109.128	6.92	71.54
+ ID2= 2 (80880):	56.14	5.562	6.33	71.70
ID = 1 (50890):	2022.92	113.001	6.92	71.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50890)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (50890):	2022.92	113.001	6.92	71.55
+ ID2= 2 (90020):	10.24	0.960	5.75	81.64
ID = 3 (50890):	2033.15	113.374	6.92	71.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60900) / IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning		
0.00	79.05	0.0450		
2.00	78.40	0.0450		
4.00	77.75	0.0450		
6.00	77.16	0.0450		
8.00	76.78	0.0450		
10.00	76.65	0.0450		
12.00	76.60	0.0450		
14.00	76.58	0.0450		
16.00	76.08	0.0450		
18.00	75.49	0.0450 /0.0350	Main Channel	
20.00	75.46	0.0350	Main Channel	
22.00	75.52	0.0350 /0.0450	Main Channel	
24.00	76.15	0.0450		
26.00	76.44	0.0450		
28.00	76.56	0.0450		
30.00	76.68	0.0450		
32.00	76.86	0.0450		
34.00	77.01	0.0450		
36.00	77.10	0.0450		
40.00	79.16	0.0450		

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.03	75.49	.127E+02	0.0	0.14	32.03
0.22	75.68	.231E+03	0.6	0.69	6.29
0.40	75.87	.510E+03	2.0	1.01	4.28
0.59	76.05	.849E+03	4.1	1.25	3.45
0.78	76.24	.125E+04	6.9	1.43	3.02
0.97	76.43	.175E+04	10.6	1.57	2.75
1.15	76.62	.240E+04	14.6	1.57	2.75
1.34	76.80	.343E+04	21.1	1.60	2.71
1.53	76.99	.465E+04	30.1	1.68	2.58
1.71	77.18	.605E+04	41.3	1.77	2.44
1.90	77.36	.754E+04	55.7	1.92	2.26
2.09	77.55	.908E+04	72.1	2.06	2.10
2.27	77.74	.107E+05	90.6	2.20	1.96
2.46	77.92	.123E+05	111.1	2.34	1.84
2.65	78.11	.140E+05	133.5	2.48	1.74
2.84	78.30	.157E+05	157.9	2.61	1.66
3.02	78.49	.175E+05	184.1	2.73	1.58
3.21	78.67	.193E+05	212.1	2.85	1.52
3.40	78.86	.211E+05	242.1	2.97	1.46

	<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50890)	2033.15	113.37	6.92	71.60	2.48	2.36
OUTFLOW: ID= 1 (60900)	2033.15	113.37	6.92	71.60	2.48	2.35

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB / STANDHYD (40910) / ID= 1 DT= 5.0 min	Area (ha)= 6.92	Total Imp(%)= 68.98	Dir. Conn.(%)= 52.91

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	4.77	2.15	
Dep. Storage	(mm)=	2.00	7.07	
Average Slope	(%)=	1.70	1.70	
Length	(m)=	214.73	44.00	
Mannings n	=	0.015	0.280	
Max.Eff.Inten.	(mm/hr)=	135.12	163.97	
over	(min)	5.00	15.00	
Storage Coeff.	(min)=	3.33 (ii)	10.22 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	15.00	
Unit Hyd. peak	(cms)=	0.26	0.09	
				TOTALS
PEAK FLOW	(cms)=	1.36	0.68	1.977 (iii)
TIME TO PEAK	(hrs)=	6.08	6.17	6.08
RUNOFF VOLUME	(mm)=	100.36	67.04	84.67
TOTAL RAINFALL	(mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT	=	0.98	0.65	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50910)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40910):	6.92	1.977	6.08	84.67
+ ID2= 2 (60900):	2033.15	113.374	6.92	71.60
ID = 3 (50910):	2040.07	113.552	6.92	71.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB / STANDHYD (******) / ID= 1 DT= 5.0 min	Area (ha)= 5.85	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	5.79	0.06	
Dep. Storage	(mm)=	2.00	4.48	
Average Slope	(%)=	1.70	1.00	
Length	(m)=	78.30	0.00	
Mannings n	=	0.013	0.030	
Max.Eff.Inten.	(mm/hr)=	135.12	108.03	
over	(min)	5.00	5.00	
Storage Coeff.	(min)=	1.67 (ii)	1.67 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	5.00	
Unit Hyd. peak	(cms)=	0.32	0.32	
				TOTALS
PEAK FLOW	(cms)=	2.17	0.02	2.192 (iii)
TIME TO PEAK	(hrs)=	6.08	6.08	6.08
RUNOFF VOLUME	(mm)=	100.36	67.14	100.03
TOTAL RAINFALL	(mm)=	102.36	102.36	102.36
RUNOFF COEFFICIENT	=	0.98	0.66	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (******)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	5.85	2.192	6.08	100.03
+ ID2= 2 (******):	1.25	0.364	6.58	75.55
ID = 3 (******):	7.10	2.192	6.08	95.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (******)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (******):	0.47	0.592	6.08	93.62
+ ID2= 2 (******):	7.27	1.497	6.58	75.55
ID = 3 (******):	7.73	1.497	6.58	76.64

```
      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     7.73   1.497     6.58    76.64
       + ID2= 2 (******):     7.10   2.192     6.08    95.73
         ==================================================
         ID = 1 (******):    14.83   3.038     6.08    85.78

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        426.51        0.0450
                    0.98        426.14        0.0350      Main Channel
                    2.04        426.14        0.0350      Main Channel
                   20.51        426.51        0.0350      Main Channel

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.00  426.14   .579E+00       0.0          0.03      191.52
         0.02  426.16   .114E+02       0.0          0.14       39.52
         0.04  426.18   .285E+02       0.0          0.19       27.56
         0.06  426.20   .520E+02       0.0          0.24       22.17
         0.08  426.22   .818E+02       0.1          0.28       18.92
         0.10  426.24   .118E+03       0.1          0.32       16.68
         0.12  426.26   .161E+03       0.2          0.36       15.02
         0.14  426.27   .210E+03       0.3          0.39       13.73
         0.16  426.29   .265E+03       0.3          0.42       12.69
         0.18  426.31   .326E+03       0.5          0.45       11.82
         0.20  426.33   .394E+03       0.6          0.48       11.10
         0.22  426.35   .469E+03       0.7          0.51       10.47
         0.24  426.37   .549E+03       0.9          0.54        9.93
         0.26  426.39   .637E+03       1.1          0.56        9.46
         0.28  426.41   .730E+03       1.3          0.59        9.03
         0.30  426.43   .830E+03       1.6          0.62        8.65
         0.32  426.45   .936E+03       1.9          0.64        8.31
         0.34  426.47   .105E+04       2.2          0.67        8.01
         0.35  426.49   .117E+04       2.5          0.69        7.72

      **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)   14.83     3.04    6.08  85.78      0.35      0.69
    OUTFLOW: ID= 1 (******)   14.83     2.26    6.17  85.78      0.34      0.67


--------------------------------------------------------------------------------
--------------------
| ROUTEPIPE(******)|     PIPE Number      =   1.00
| IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
| DT=  5.00 min    |     Length        (m)= 372.00
--------------------     Slope       (m/m)=  0.004
                         Manning n         =  0.013

      <------------------ TRAVEL TIME TABLE ---------------------->
        DEPTH      VOLUME     FLOW RATE     VELOCITY     TRAV.TIME
          (m)     (cu.m.)       (cms)        (m/s)         min
         0.05     .423E+02       0.1          0.58        10.67
         0.09     .846E+02       0.2          0.90         6.89
         0.14     .127E+03       0.4          1.15         5.39
         0.19     .169E+03       0.6          1.36         4.55
         0.24     .211E+03       0.9          1.55         4.01
         0.28     .254E+03       1.2          1.71         3.63
         0.33     .296E+03       1.5          1.85         3.34
         0.38     .338E+03       1.8          1.99         3.12
         0.43     .381E+03       2.2          2.11         2.94
         0.47     .423E+03       2.5          2.22         2.80
         0.52     .465E+03       2.9          2.32         2.67
         0.57     .507E+03       3.3          2.41         2.57
         0.62     .550E+03       3.7          2.50         2.48
         0.66     .592E+03       4.1          2.58         2.40
         0.71     .634E+03       4.5          2.66         2.33
         0.76     .677E+03       5.0          2.73         2.27
         0.81     .719E+03       5.4          2.80         2.21
         0.85     .761E+03       5.9          2.86         2.17
         0.90     .804E+03       6.3          2.92         2.12
                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    3.64     0.85    6.08  93.62      0.23      1.52
    OUTFLOW: ID= 1 (******)    3.64     0.86    6.08  93.62      0.23      1.53


      **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   7.90   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

      Unit Hyd Qpeak  (cms)=   0.774

      PEAK FLOW       (cms)=   1.025 (i)
      TIME TO PEAK    (hrs)=   6.333
      RUNOFF VOLUME    (mm)=  67.126
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.656

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.33   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

      Unit Hyd Qpeak  (cms)=   0.070

      PEAK FLOW       (cms)=   0.069 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  66.943
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.654

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     0.33   0.069     6.08    66.94
       + ID2= 2 (******):     7.90   1.025     6.33    67.13
         ==================================================
         ID = 3 (******):     8.23   1.066     6.33    67.12

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  17.88   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.48

      Unit Hyd Qpeak  (cms)=   1.423

      PEAK FLOW       (cms)=   2.001 (i)
      TIME TO PEAK    (hrs)=   6.417
      RUNOFF VOLUME    (mm)=  67.132
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.656

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.44   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.19

      Unit Hyd Qpeak  (cms)=   0.088

      PEAK FLOW       (cms)=   0.089 (i)
      TIME TO PEAK    (hrs)=   6.167
      RUNOFF VOLUME    (mm)=  66.979
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.654

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    17.88   2.001     6.42    67.13
       + ID2= 2 (******):     0.44   0.089     6.17    66.98
         ==================================================
         ID = 3 (******):    18.32   2.044     6.42    67.13

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.19   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

      Unit Hyd Qpeak  (cms)=   0.048

      PEAK FLOW       (cms)=   0.045 (i)
      TIME TO PEAK    (hrs)=   6.083
      RUNOFF VOLUME    (mm)=  66.747
      TOTAL RAINFALL   (mm)= 102.360
      RUNOFF COEFFICIENT   =   0.652

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    18.51   2.057     6.42    67.12
       + ID2= 2 (******):     0.19   0.045     6.08    66.75
         ==================================================
         ID = 3 (******):    18.32   2.044     6.42    67.13

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    18.51   2.057     6.42    67.12
       + ID2= 2 (******):     8.23   1.066     6.33    67.12
         ==================================================
         ID = 1 (******):    26.74   3.093     6.33    67.12

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    26.74   3.093     6.33    67.12
       + ID2= 2 (******):     3.64   0.856     6.08    93.62
         ==================================================
         ID = 3 (******):    30.38   3.411     6.25    70.30

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    30.38   3.411     6.25    70.30
       + ID2= 2 (******):    14.83   2.258     6.17    85.78
         ==================================================
         ID = 1 (******):    45.21   5.589     6.17    75.38

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        418.26        0.0450
                   40.58        417.27        0.0450
                   68.64        416.80        0.0450
                  140.74        415.56        0.0450
                  163.74        415.03    0.0450 /0.0350  Main Channel
                  211.93        413.30        0.0350      Main Channel
                  250.43        411.92        0.0350      Main Channel
                  258.86        411.77        0.0350      Main Channel
                  276.07        411.80        0.0350      Main Channel
                  290.03        411.70        0.0350      Main Channel
                  294.99        411.74        0.0350      Main Channel
                  298.74        411.97        0.0350      Main Channel
                  309.80        412.64        0.0350      Main Channel
                  321.40        413.39        0.0350      Main Channel
                  332.67        415.03    0.0350 /0.0450  Main Channel
                  344.47        416.63        0.0450
                  360.44        418.31        0.0450
                  381.73        419.43        0.0450
                  385.80        419.95        0.0450
                  389.30        420.75        0.0450

       <--------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.33  412.03   .115E+05      14.5          1.18       13.21
         0.67  412.36   .302E+05      61.5          1.91        8.18
         1.00  412.70   .535E+05     139.9          2.46        6.38
         1.33  413.03   .814E+05     252.5          2.91        5.37
         1.66  413.36   .114E+06     402.0          3.32        4.72
         2.00  413.70   .150E+06     597.3          3.74        4.19
         2.33  414.03   .190E+06     834.3          4.12        3.80
         2.66  414.36   .234E+06    1114.3          4.47        3.50
         2.99  414.69   .281E+06    1439.4          4.80        3.26
         3.33  415.03   .332E+06    1811.8          5.12        3.06
         3.69  415.39   .393E+06    2361.5          5.65        2.77
         4.05  415.75   .459E+06    2978.2          6.10        2.57
         4.41  416.10   .533E+06    3668.2          6.46        2.42
         4.76  416.46   .615E+06    4437.5          6.78        2.31
         5.12  416.82   .705E+06    5290.7          7.05        2.22
         5.48  417.18   .804E+06    6232.2          7.29        2.15
         5.84  417.54   .910E+06    7276.0          7.51        2.08
         6.20  417.90   .102E+07    8417.1          7.74        2.02
         6.56  418.26   .114E+07    9654.5          7.95        1.97

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
```

```
                                (ha)     (cms)    (hrs)    (mm)       (m)       (m/s)
   INFLOW : ID= 2 (******)    45.21      5.59     6.17   75.38      0.13       1.18
   OUTFLOW: ID= 1 (******)    45.21      4.94     6.67   75.38      0.11       1.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 85.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   3.151 (i)
     TIME TO PEAK    (hrs)=   6.500
     RUNOFF VOLUME    (mm)=  67.133
     TOTAL RAINFALL   (mm)= 102.360
     RUNOFF COEFFICIENT   =   0.656

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    31.02   3.151     6.50    67.13
      + ID2= 2 (******):    45.21   4.942     6.67    75.38
        ================================================
        ID = 3 (******):    76.23   8.061     6.58    72.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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 FINISH
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        V    V   I    SSSSS  U   U    A    L              (v 6.2.2022)
        V    V   I    SS     U   U   A A   L
         V  V    I     SS    U   U  AAAAA  L
          V V    I      SS   U   U A   A  L
           VV    I    SSSSS  UUUUU A   A  LLLLL
 
         OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
        O   O    T      T    H   H   Y Y   MM MM  O   O
        O   O    T      T    H   H    Y    M M M  O   O
         OOO     T      T    H   H    Y    M   M   OOO
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                    *****  D E T A I L E D   O U T P U T *****
 
   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
   Output  filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
   Summary filename: C:\Users\DPham\AppData\Local\Civica\VH5\d0f5fd40-d7fc-419f-9
 
 DATE: 02/19/2026                          TIME: 06:11:45
 
 USER:
 
 
 COMMENTS: _____________________________________________________
 
 --------------------------------------------------------------------------------
   ************************************************
   ** SIMULATION : Regional_12HR_100             **
   ************************************************
 
 --------------------
 |    READ STORM    |    Filename: C:\Users\DPham\AppD
 |                  |              ata\Local\Temp\
 |                  |              aae5142e-fd4c-4e22-8610-6b447c63da52\730862d3
 | Ptotal=212.34 mm |    Comments: Regional_12HR_100
 --------------------
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.00    0.00 |  3.17   12.70 |   6.33   23.11 |  9.50   52.83
                  0.17    6.35 |  3.33   12.70 |   6.50   23.11 |  9.67   52.83
                  0.33    6.35 |  3.50   12.70 |   6.67   23.11 |  9.83   52.83
                  0.50    6.35 |  3.67   12.70 |   6.83   23.11 | 10.00   52.83
                  0.67    6.35 |  3.83   12.70 |   7.00   23.11 | 10.17   37.85
                  0.83    6.35 |  4.00   12.70 |   7.17   12.70 | 10.33   37.85
                  1.00    6.35 |  4.17   16.76 |   7.33   12.70 | 10.50   37.85
                  1.17    4.32 |  4.33   16.76 |   7.50   12.70 | 10.67   37.85
                  1.33    4.32 |  4.50   16.76 |   7.67   12.70 | 10.83   37.85
                  1.50    4.32 |  4.67   16.76 |   7.83   12.70 | 11.00   37.85
                  1.67    4.32 |  4.83   16.76 |   8.00   12.70 | 11.17   12.70
                  1.83    4.32 |  5.00   16.76 |   8.17   12.70 | 11.33   12.70
                  2.00    4.32 |  5.17   13.97 |   8.33   12.70 | 11.50   12.70
                  2.17    6.35 |  5.33   13.97 |   8.50   12.70 | 11.67   12.70
                  2.33    6.35 |  5.50   13.97 |   8.67   12.70 | 11.83   12.70
                  2.50    6.35 |  5.67   13.97 |   8.83   12.70 | 12.00   12.70
                  2.67    6.35 |  5.83   13.97 |   9.00   12.70 |
                  2.83    6.35 |  6.00   13.97 |   9.17   52.83 |
                  3.00    6.35 |  6.17   23.11 |   9.33   52.83 |
 
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 --------------------
 | CALIB            |
 | NASHYD   ( 40010)|   Area     (ha)=  43.09   Curve Number    (CN)= 90.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.41   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.47
 
          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
 
                                 ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
 
      Unit Hyd Qpeak  (cms)=   3.502
 
      PEAK FLOW       (cms)=   5.491 (i)
      TIME TO PEAK    (hrs)=  10.417
      RUNOFF VOLUME    (mm)= 179.127
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.844
 
      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 
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 --------------------
 | CALIB            |
 | NASHYD   ( 40030)|   Area     (ha)=  54.88   Curve Number    (CN)= 90.0
 |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.34   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.46
 
          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
 
                                 ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
 
      Unit Hyd Qpeak  (cms)=   4.557
 
      PEAK FLOW       (cms)=   7.037 (i)
      TIME TO PEAK    (hrs)=  10.333
      RUNOFF VOLUME    (mm)= 179.195
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.844
 
      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
 
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 --------------------
 | READ HYD (  0407)|   AREA       (ha)= 289.00
 | DT= 5.0 min      |   TPEAK     (hrs)=  11.08
 --------------------   VOLUME     (mm)=  14.53
   Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
   Comments: SPILL FROM APPLEBY TO SHELDON NORTH OF HIGHWAY 407
 
   TIME    FLOW |  TIME    FLOW |  TIME    FLOW |'  TIME    FLOW |  TIME    FLOW
    hrs     cms |   hrs     cms |   hrs     cms |'   hrs     cms |   hrs     cms
   0.00   0.000 |  4.83   0.013 |  9.67   0.756 | 14.50   0.000 | 19.33   0.000
   0.08   0.000 |  4.92   0.030 |  9.75   0.954 | 14.58   0.000 | 19.42   0.000
   0.17   0.000 |  5.00   0.058 |  9.83   1.177 | 14.67   0.000 | 19.50   0.000
   0.25   0.000 |  5.08   0.092 |  9.92   1.422 | 14.75   0.000 | 19.58   0.000
   0.33   0.000 |  5.17   0.127 | 10.00   1.703 | 14.83   0.000 | 19.67   0.000
   0.42   0.000 |  5.25   0.157 | 10.08   2.017 | 14.92   0.000 | 19.75   0.000
   0.50   0.000 |  5.33   0.189 | 10.17   2.341 | 15.00   0.000 | 19.83   0.000
   0.58   0.000 |  5.42   0.220 | 10.25   2.668 | 15.08   0.000 | 19.92   0.000
   0.67   0.000 |  5.50   0.249 | 10.33   2.988 | 15.17   0.000 | 20.00   0.000
   0.75   0.000 |  5.58   0.274 | 10.42   3.282 | 15.25   0.000 | 20.08   0.000
   0.83   0.000 |  5.67   0.295 | 10.50   3.543 | 15.33   0.000 | 20.17   0.000
   0.92   0.000 |  5.75   0.313 | 10.58   3.763 | 15.42   0.000 | 20.25   0.000
   1.00   0.000 |  5.83   0.328 | 10.67   3.941 | 15.50   0.000 | 20.33   0.000
   1.08   0.000 |  5.92   0.339 | 10.75   4.072 | 15.58   0.000 | 20.42   0.000
   1.17   0.000 |  6.00   0.348 | 10.83   4.170 | 15.67   0.000 | 20.50   0.000
   1.25   0.000 |  6.08   0.354 | 10.92   4.232 | 15.75   0.000 | 20.58   0.000
   1.33   0.000 |  6.17   0.360 | 11.00   4.266 | 15.83   0.000 | 20.67   0.000
   1.42   0.000 |  6.25   0.364 | 11.08   4.277 | 15.92   0.000 | 20.75   0.000
   1.50   0.000 |  6.33   0.370 | 11.17   4.270 | 16.00   0.000 | 20.83   0.000
   1.58   0.000 |  6.42   0.379 | 11.25   4.246 | 16.08   0.000 | 20.92   0.000
   1.67   0.000 |  6.50   0.395 | 11.33   4.203 | 16.17   0.000 | 21.00   0.000
   1.75   0.000 |  6.58   0.419 | 11.42   4.133 | 16.25   0.000 | 21.08   0.000
   1.83   0.000 |  6.67   0.450 | 11.50   4.030 | 16.33   0.000 | 21.17   0.000
   1.92   0.000 |  6.75   0.490 | 11.58   3.890 | 16.42   0.000 | 21.25   0.000
   2.00   0.000 |  6.83   0.536 | 11.67   3.718 | 16.50   0.000 | 21.33   0.000
   2.08   0.000 |  6.92   0.588 | 11.75   3.519 | 16.58   0.000 | 21.42   0.000
   2.17   0.000 |  7.00   0.644 | 11.83   3.303 | 16.67   0.000 | 21.50   0.000
   2.25   0.000 |  7.08   0.702 | 11.92   3.067 | 16.75   0.000 | 21.58   0.000
   2.33   0.000 |  7.17   0.759 | 12.00   2.825 | 16.83   0.000 | 21.67   0.000
   2.42   0.000 |  7.25   0.816 | 12.08   2.584 | 16.92   0.000 | 21.75   0.000
   2.50   0.000 |  7.33   0.870 | 12.17   2.352 | 17.00   0.000 | 21.83   0.000
   2.58   0.000 |  7.42   0.914 | 12.25   2.128 | 17.08   0.000 | 21.92   0.000
   2.67   0.000 |  7.50   0.945 | 12.33   1.911 | 17.17   0.000 | 22.00   0.000
   2.75   0.000 |  7.58   0.963 | 12.42   1.697 | 17.25   0.000 | 22.08   0.000
   2.83   0.000 |  7.67   0.969 | 12.50   1.484 | 17.33   0.000 | 22.17   0.000
   2.92   0.000 |  7.75   0.961 | 12.58   1.268 | 17.42   0.000 | 22.25   0.000
   3.00   0.000 |  7.83   0.942 | 12.67   1.058 | 17.50   0.000 | 22.33   0.000
   3.08   0.000 |  7.92   0.912 | 12.75   0.871 | 17.58   0.000 | 22.42   0.000
   3.17   0.000 |  8.00   0.876 | 12.83   0.698 | 17.67   0.000 | 22.50   0.000
   3.25   0.000 |  8.08   0.835 | 12.92   0.540 | 17.75   0.000 | 22.58   0.000
   3.33   0.000 |  8.17   0.791 | 13.00   0.395 | 17.83   0.000 | 22.67   0.000
   3.42   0.000 |  8.25   0.747 | 13.08   0.272 | 17.92   0.000 | 22.75   0.000
   3.50   0.000 |  8.33   0.703 | 13.17   0.174 | 18.00   0.000 | 22.83   0.000
   3.58   0.000 |  8.42   0.661 | 13.25   0.098 | 18.08   0.000 | 22.92   0.000
   3.67   0.000 |  8.50   0.620 | 13.33   0.039 | 18.17   0.000 | 23.00   0.000
   3.75   0.000 |  8.58   0.581 | 13.42   0.012 | 18.25   0.000 | 23.08   0.000
   3.83   0.000 |  8.67   0.546 | 13.50   0.003 | 18.33   0.000 | 23.17   0.000
   3.92   0.000 |  8.75   0.516 | 13.58   0.000 | 18.42   0.000 | 23.25   0.000
   4.00   0.000 |  8.83   0.490 | 13.67   0.000 | 18.50   0.000 | 23.33   0.000
   4.08   0.000 |  8.92   0.466 | 13.75   0.000 | 18.58   0.000 | 23.42   0.000
   4.17   0.000 |  9.00   0.444 | 13.83   0.000 | 18.67   0.000 | 23.50   0.000
   4.25   0.000 |  9.08   0.427 | 13.92   0.000 | 18.75   0.000 | 23.58   0.000
   4.33   0.000 |  9.17   0.411 | 14.00   0.000 | 18.83   0.000 | 23.67   0.000
   4.42   0.000 |  9.25   0.400 | 14.08   0.000 | 18.92   0.000 | 23.75   0.000
   4.50   0.000 |  9.33   0.402 | 14.17   0.000 | 19.00   0.000 | 23.83   0.000
   4.58   0.000 |  9.42   0.429 | 14.25   0.000 | 19.08   0.000 | 23.92   0.000
   4.67   0.000 |  9.50   0.493 | 14.33   0.000 | 19.17   0.000 | 24.00   0.000
   4.75   0.004 |  9.58   0.602 | 14.42   0.000 | 19.25   0.000 |
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 --------------------
 | ADD HYD  ( 50010)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40010):    43.09   5.491    10.42   179.13
      + ID2= 2 ( 40030):    54.88   7.037    10.33   179.20
        ================================================
        ID = 3 ( 50010):    97.97  12.527    10.33   179.17
 
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 --------------------
 | ADD HYD  ( 50010)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50010):    97.97  12.527    10.33   179.17
      + ID2= 2 (  0407):   289.00   4.277    11.08    14.53
        ================================================
        ID = 1 ( 50010):   386.97  15.938    10.58    56.21
 
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 --------------------
 | ROUTE CHN( 60010)|
 | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
 --------------------
                 <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         160.98        0.0450
                   10.00         160.83        0.0450
                   20.00         160.72        0.0450
                   30.00         160.67        0.0450
                   40.00         160.61        0.0450
                   50.00         160.60        0.0450
                   60.00         160.55        0.0450
                   70.00         160.65        0.0450
                   80.00         159.78        0.0450
                   90.00         157.33    0.0450 /0.0350  Main Channel
                  100.00         157.18        0.0350      Main Channel
                  110.00         158.55        0.0450
                  120.00         160.34        0.0450
                  130.00         160.29        0.0450
                  140.00         160.30        0.0450
                  150.00         160.38        0.0450
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                160.00        160.53        0.0450
                170.00        160.58        0.0450
                180.00        160.51        0.0450
                190.00        160.53        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.15   157.33    .123E+04        0.4         0.43      57.39
        0.32   157.50    .422E+04        2.5         0.88      27.82
        0.49   157.67    .768E+04        6.3         1.20      20.47
        0.66   157.83    .116E+05       11.5         1.45      16.89
        0.83   158.00    .160E+05       18.2         1.67      14.70
        0.99   158.17    .209E+05       26.5         1.86      13.18
        1.16   158.34    .263E+05       36.3         2.03      12.06
        1.33   158.51    .321E+05       47.9         2.19      11.18
        1.50   158.68    .384E+05       62.7         2.40      10.21
        1.67   158.84    .451E+05       79.9         2.60       9.41
        1.84   159.01    .522E+05       99.0         2.79       8.79
        2.00   159.18    .597E+05      120.2         2.96       8.28
        2.17   159.35    .676E+05      143.3         3.11       7.86
        2.34   159.52    .759E+05      168.5         3.26       7.51
        2.51   159.69    .846E+05      195.8         3.40       7.20
        2.68   159.86    .938E+05      224.4         3.52       6.97
        2.85   160.02    .104E+06      254.6         3.61       6.78
        3.02   160.19    .114E+06      287.5         3.70       6.62
        3.18   160.36    .127E+06      315.8         3.64       6.72

                                   <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50010)  386.97    15.94   10.58  56.21      0.77      1.59
   OUTFLOW: ID= 1 ( 60010)  386.97    15.57   10.83  56.21      0.76      1.57


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40020)|   Area    (ha)=  51.32
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  56.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      33.87        17.45
     Dep. Storage     (mm)=       2.00         6.20
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     584.91        50.00
     Mannings n           =      0.015        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
       hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
     0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
     0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
     0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
     0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
     0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
     0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
     0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
     0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
     0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
     0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
     0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
     1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
     1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
     1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
     1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
     1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
     1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
     1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
     1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
     1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
     1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
     1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
     1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
     2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
     2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
     2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
     2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
     2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
     2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
     2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
     2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
     2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
     2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
     2.833     6.35 | 5.917    13.97 | 9.000    12.70 | 12.08    12.70
     2.917     6.35 | 6.000    13.97 | 9.083    12.70 | 12.17    12.70
     3.000     6.35 | 6.083    13.97 | 9.167    12.70 |
     3.083     6.35 | 6.167    13.97 | 9.250    52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        67.27
               over (min)       10.00        25.00
  Storage Coeff.  (min)=       9.58 (ii)    21.35 (ii)
  Unit Hyd. Tpeak (min)=      10.00        25.00
  Unit Hyd. peak  (cms)=       0.11         0.05
                                                *TOTALS*
  PEAK FLOW       (cms)=       4.21         3.01          7.188 (iii)
  TIME TO PEAK    (hrs)=      10.17        10.25          10.17
  RUNOFF VOLUME    (mm)=     210.34       187.81         200.43
  TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
  RUNOFF COEFFICIENT   =       0.99         0.88           0.94

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  90.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50020)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40020):    51.32   7.188    10.17   200.43
     + ID2= 2 ( 60010):   386.97  15.573    10.83    56.21
       ===================================================
       ID = 3 ( 50020):   438.29  21.246    10.67    73.09

  NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60020)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
            <------ DATA FOR SECTION (   1.1) ------>
            Distance      Elevation       Manning
                0.00        153.66        0.0450
                1.00        153.24        0.0450
                2.00        152.95        0.0450
                3.00        152.70        0.0450
                4.00        152.40        0.0450
                5.00        152.09        0.0450
                6.00        151.83        0.0450
                7.00        151.60        0.0450
                8.00        151.49    0.0450 /0.0350  Main Channel
                9.00        151.42        0.0350      Main Channel
               10.00        151.38        0.0350      Main Channel
               11.00        151.40        0.0350      Main Channel
               12.00        151.38        0.0350      Main Channel
               13.00        151.38        0.0350      Main Channel
               14.00        151.38        0.0350      Main Channel
               15.00        151.50    0.0350 /0.0450  Main Channel
               16.00        151.56        0.0450
               17.00        151.60        0.0450
               25.00        153.59        0.0450
               26.00        153.63        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.12   151.49    .140E+03        0.2         0.36      10.54
       0.23   151.60    .355E+03        0.9         0.58       6.57
       0.34   151.72    .624E+03        2.0         0.74       5.11
       0.45   151.83    .916E+03        3.6         0.89       4.27
       0.57   151.94    .123E+04        5.5         1.02       3.73
       0.68   152.05    .157E+04        7.8         1.13       3.35
       0.79   152.17    .193E+04       10.5         1.24       3.06
       0.90   152.28    .231E+04       13.6         1.34       2.83
       1.02   152.39    .271E+04       17.1         1.43       2.65
       1.13   152.50    .314E+04       20.9         1.52       2.50
       1.24   152.62    .358E+04       25.2         1.60       2.37
       1.35   152.73    .405E+04       29.8         1.67       2.26
       1.47   152.84    .454E+04       34.9         1.75       2.17
       1.58   152.95    .505E+04       40.3         1.81       2.09
       1.69   153.07    .558E+04       46.2         1.88       2.01
       1.80   153.18    .614E+04       52.6         1.95       1.95
       1.92   153.29    .672E+04       59.4         2.01       1.88
       2.03   153.40    .731E+04       66.7         2.07       1.83
       2.14   153.52    .793E+04       74.5         2.14       1.77

                                   <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50020)  438.29    21.25   10.67  73.09      1.14      1.52
   OUTFLOW: ID= 1 ( 60020)  438.29    21.24   10.75  73.09      1.14      1.52


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--------------------
| CALIB            |
| STANDHYD ( 40040)|   Area    (ha)=  70.68
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  60.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      52.31        18.38
     Dep. Storage     (mm)=       2.00         6.00
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     686.45        52.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
       hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
     0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
     0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
     0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
     0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
     0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
     0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
     0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
     0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
     0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
     0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
     0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
     1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
     1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
     1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
     1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
     1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
     1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
     1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
     1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
     1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
     1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
     1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
     1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
     2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
     2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
     2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
     2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
     2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
     2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
     2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
     2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
     2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
     2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
     2.833     6.35 | 5.917    13.97 | 9.000    12.70 | 12.08    12.70
     2.917     6.35 | 6.000    13.97 | 9.083    12.70 | 12.17    12.70
     3.000     6.35 | 6.083    13.97 | 9.167    12.70 |
     3.083     6.35 | 6.167    13.97 | 9.250    52.83 |

  Max.Eff.Inten.(mm/hr)=      52.83        80.32
               over (min)       10.00        25.00
  Storage Coeff.  (min)=      10.81 (ii)   22.06 (ii)
  Unit Hyd. Tpeak (min)=      10.00        25.00
  Unit Hyd. peak  (cms)=       0.11         0.05
                                                *TOTALS*
  PEAK FLOW       (cms)=       6.20         3.77          9.926 (iii)
  TIME TO PEAK    (hrs)=      10.17        10.25          10.17
  RUNOFF VOLUME    (mm)=     210.34       191.58         202.84
  TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
  RUNOFF COEFFICIENT   =       0.99         0.90           0.96

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  90.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50220)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40040):    70.68   9.926    10.17   202.84
     + ID2= 2 ( 60020):   438.29  21.236    10.75    73.09
       ===================================================
       ID = 3 ( 50220):   508.97  29.513    10.25    91.11

  NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60040)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
            <------ DATA FOR SECTION (   1.1) ------>
            Distance      Elevation       Manning
                0.00        148.49        0.0450
                3.00        148.12        0.0450
                6.00        148.07        0.0450
                9.00        147.63        0.0450
               12.00        147.56        0.0450
               15.00        147.55        0.0450
               18.00        147.46        0.0450
               21.00        147.41        0.0450
               24.00        147.36        0.0450
               27.00        147.38        0.0450
               30.00        147.22        0.0450
               33.00        147.00        0.0450
               36.00        146.34        0.0450
               39.00        145.57        0.0350      Main Channel
               42.00        145.39        0.0350      Main Channel
               45.00        145.66        0.0350      Main Channel
               48.00        146.68        0.0450
               51.00        147.50        0.0450
               55.00        148.22        0.0450
               60.00        148.42        0.0450

     <---------------------- TRAVEL TIME TABLE ---------------------->
      DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.09   145.48    .145E+03        0.0         0.25      83.65
       0.18   145.57    .581E+03        0.2         0.40      52.70
       0.35   145.74    .189E+04        1.1         0.73      29.09
       0.52   145.91    .348E+04        2.7         0.99      21.52
```

```
        0.68   146.07    .532E+04       5.0          1.19      17.84
        0.85   146.24    .740E+04       7.9          1.36      15.60
        1.02   146.41    .973E+04      11.5          1.51      14.07
        1.19   146.58    .123E+05      15.9          1.64      12.94
        1.35   146.74    .152E+05      21.2          1.78      11.93
        1.52   146.91    .183E+05      27.8          1.94      10.99
        1.69   147.08    .218E+05      35.0          2.05      10.39
        1.86   147.25    .259E+05      43.0          2.12      10.03
        2.02   147.41    .309E+05      50.6          2.09      10.18
        2.19   147.58    .383E+05      61.5          2.05      10.37
        2.36   147.75    .474E+05      77.1          2.07      10.25
        2.52   147.91    .571E+05      95.6          2.14       9.95
        2.69   148.08    .672E+05     116.0          2.20       9.65
        2.86   148.25    .783E+05     138.1          2.25       9.45
        3.03   148.42    .904E+05     163.4          2.31       9.22

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50220)  508.97    29.51   10.25  91.11      1.56      1.96
   OUTFLOW: ID= 1 ( 60040)  508.97    29.20   10.67  91.11      1.55      1.95


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--------------------
| CALIB            |
| STANDHYD ( 40050)|   Area    (ha)=  52.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.00   Dir. Conn.(%)=  49.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      32.94         19.34
     Dep. Storage     (mm)=       2.00          6.30
     Average Slope     (%)=       3.30          3.30
     Length            (m)=     590.36         68.00
     Mannings n           =      0.015         0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        71.99
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       7.29 (ii)   17.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.76         3.70          7.459 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       191.01        200.48
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.90          0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  91.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50040)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40050):    52.28    7.459    10.17   200.48
     + ID2= 2 ( 60040):   508.97   29.199    10.67    91.11
       ================================================
       ID = 3 ( 50040):   561.25   35.246    10.42   101.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60050)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         146.35        0.0450
                 16.00         145.17        0.0450
                 18.00         144.62        0.0450
                 20.00         143.50        0.0450
                 26.00         141.63        0.0350      Main Channel
                 30.00         142.17        0.0350      Main Channel
                 34.00         144.28        0.0450
                 38.00         145.27        0.0450
                 50.00         146.42        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.25   141.88    .129E+03        0.2          0.54      12.17
        0.50   142.13    .516E+03        1.1          0.86       7.67
        0.74   142.38    .111E+04        3.4          1.21       5.42
        0.99   142.63    .184E+04        7.0          1.50       4.37
        1.24   142.87    .269E+04       11.9          1.75       3.76
        1.49   143.12    .366E+04       18.2          1.96       3.36
        1.74   143.37    .476E+04       25.9          2.15       3.06
        1.98   143.62    .597E+04       35.3          2.33       2.82
        2.23   143.87    .729E+04       46.5          2.52       2.61
        2.48   144.11    .869E+04       59.3          2.69       2.44
        2.73   144.36    .102E+05       74.3          2.88       2.28
        2.97   144.61    .118E+05       92.4          3.09       2.13
        3.22   144.86    .136E+05      111.6          3.24       2.03
        3.47   145.11    .156E+05      133.1          3.37       1.95
        3.72   145.35    .178E+05      152.6          3.38       1.94
        3.97   145.60    .206E+05      175.6          3.37       1.95
        4.21   145.85    .239E+05      204.3          3.37       1.95
        4.46   146.10    .279E+05      238.6          3.38       1.95
        4.71   146.35    .324E+05      279.0          3.40       1.93

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50040)  561.25    35.25   10.42 101.30      1.98      2.33
   OUTFLOW: ID= 1 ( 60050)  561.25    35.24   10.42 101.30      1.98      2.33


--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60060)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         142.52        0.0450
                  2.00         142.41        0.0450
                  4.00         142.26        0.0450
                  6.00         142.08        0.0450
                  8.00         141.85        0.0450
                 10.00         141.61        0.0450
                 12.00         141.38        0.0450
                 14.00         141.11        0.0450
                 16.00         140.93        0.0450
                 18.00         140.83        0.0450
                 20.00         140.73        0.0350      Main Channel
                 22.00         140.55        0.0350      Main Channel
                 24.00         140.49        0.0350      Main Channel
                 26.00         140.65        0.0350      Main Channel
                 28.00         141.04        0.0450
                 30.00         141.72        0.0450
                 32.00         142.19        0.0450
                 40.00         142.50        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   140.57    .466E+02        0.0          0.23      24.59
        0.15   140.65    .155E+03        0.2          0.38      14.98
        0.23   140.73    .305E+03        0.5          0.51      11.12
        0.34   140.84    .598E+03        1.2          0.68       8.29
        0.45   140.95    .995E+03        2.3          0.80       7.09
        0.56   141.06    .147E+04        3.9          0.91       6.22
        0.68   141.17    .201E+04        6.1          1.04       5.45
        0.79   141.28    .259E+04        8.8          1.16       4.89
        0.90   141.39    .321E+04       12.0          1.27       4.47
        1.01   141.50    .389E+04       15.6          1.36       4.16
        1.12   141.61    .461E+04       19.7          1.45       3.90
        1.23   141.72    .537E+04       24.3          1.54       3.69
        1.34   141.84    .619E+04       29.4          1.61       3.52
        1.45   141.95    .707E+04       35.0          1.68       3.37
        1.56   142.06    .799E+04       41.1          1.75       3.24
        1.67   142.17    .898E+04       47.8          1.81       3.13
        1.79   142.28    .101E+05       54.6          1.85       3.07
        1.90   142.39    .113E+05       62.1          1.87       3.03
        2.01   142.50    .127E+05       70.3          1.88       3.01

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60050)  561.25    35.24   10.42 101.30      1.46      1.69
   OUTFLOW: ID= 1 ( 60060)  561.25    35.22   10.50 101.30      1.46      1.69


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40060)|   Area    (ha)=   2.84
|ID= 1 DT= 5.0 min |   Total Imp(%)=  33.12   Dir. Conn.(%)=  26.27
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.94          1.90
     Dep. Storage     (mm)=       2.00          7.70
     Average Slope     (%)=       2.60          2.60
     Length            (m)=     137.56         98.00
     Mannings n           =      0.015         0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        57.39
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       3.27 (ii)   19.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.27         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.29          0.394 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       187.10        193.20
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.88          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  92.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50070)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40060):     2.84    0.394    10.17   193.20
     + ID2= 2 ( 60060):   561.25   35.217    10.50   101.30
       ================================================
       ID = 3 ( 50070):   564.09   35.556    10.50   101.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

CALIB	
STANDHYD (40080)	Area (ha)= 39.85
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	26.30	13.55
Dep. Storage	(mm)=	2.00	5.60
Average Slope	(%)=	1.40	1.40
Length	(m)=	515.42	72.00
Mannings n	=	0.015	0.270

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.	(mm/hr)=	52.83	70.62
over	(min)	10.00	25.00
Storage Coeff.	(min)=	8.69 (ii)	22.14 (ii)
Unit Hyd. Tpeak	(min)=	10.00	25.00
Unit Hyd. peak	(cms)=	0.12	0.05

				TOTALS
PEAK FLOW	(cms)=	3.15	2.44	5.568 (iii)
TIME TO PEAK	(hrs)=	10.17	10.25	10.17
RUNOFF VOLUME	(mm)=	210.34	191.15	201.51
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.90	0.95

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 91.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50080)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40080):	39.85	5.568	10.17	201.51
+ ID2= 2 (50070):	564.09	35.556	10.50	101.76
ID = 3 (50080):	603.94	40.386	10.42	108.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60080)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	141.24	0.0450	
40.00	140.58	0.0450	
50.00	140.57	0.0450	
60.00	140.36	0.0450	
70.00	140.19	0.0450	
80.00	140.15	0.0450	
90.00	139.70	0.0450	
100.00	139.54	0.0350	Main Channel
110.00	139.97	0.0450	
120.00	140.53	0.0450	
130.00	140.63	0.0450	
140.00	140.72	0.0450	
150.00	140.87	0.0450	
190.00	141.16	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.09	139.63	.150E+03	0.1	0.18	43.53
0.17	139.71	.598E+03	0.4	0.30	27.01
0.26	139.80	.126E+04	1.1	0.42	19.24
0.34	139.88	.209E+04	2.2	0.52	15.58
0.43	139.97	.307E+04	3.8	0.60	13.36
0.51	140.05	.420E+04	6.1	0.70	11.45
0.60	140.14	.548E+04	9.0	0.79	10.19
0.68	140.22	.714E+04	11.3	0.76	10.55
0.77	140.31	.919E+04	15.7	0.82	9.77
0.85	140.39	.115E+05	21.0	0.88	9.11
0.94	140.48	.141E+05	27.4	0.94	8.54
1.02	140.56	.169E+05	34.6	0.99	8.12
1.11	140.65	.205E+05	41.1	0.97	8.32
1.19	140.74	.248E+05	51.5	1.00	8.02
1.28	140.82	.296E+05	64.0	1.04	7.70
1.36	140.91	.348E+05	78.0	1.08	7.44
1.45	140.99	.407E+05	93.6	1.11	7.24
1.53	141.08	.472E+05	111.7	1.14	7.05
1.62	141.16	.545E+05	132.2	1.17	6.87

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50080)	603.94	40.39	10.42	108.34	1.10	0.97
OUTFLOW: ID= 1 (60080)	603.94	39.90	10.67	108.34	1.09	0.97

CALIB	
STANDHYD (40090)	Area (ha)= 4.45
ID= 1 DT= 5.0 min	Total Imp(%)= 22.23 Dir. Conn.(%)= 13.77

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.99	3.46
Dep. Storage	(mm)=	2.00	9.68
Average Slope	(%)=	2.40	2.40
Length	(m)=	172.19	99.00
Mannings n	=	0.015	0.370

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.	(mm/hr)=	52.83	57.00
over	(min)	5.00	25.00
Storage Coeff.	(min)=	3.83 (ii)	22.06 (ii)
Unit Hyd. Tpeak	(min)=	5.00	25.00
Unit Hyd. peak	(cms)=	0.25	0.05

				TOTALS
PEAK FLOW	(cms)=	0.09	0.50	0.586 (iii)
TIME TO PEAK	(hrs)=	10.17	10.25	10.17
RUNOFF VOLUME	(mm)=	210.34	178.75	183.10
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.84	0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50090)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40090):	4.45	0.586	10.17	183.10
+ ID2= 2 (60080):	603.94	39.902	10.67	108.34
ID = 3 (50090):	608.39	40.417	10.67	108.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60100)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	138.71	0.0450	
4.00	136.97	0.0450	
28.00	135.94	0.0450	
32.00	135.79	0.0350	Main Channel
36.00	135.23	0.0350	Main Channel
40.00	135.71	0.0350 /0.0450	Main Channel
54.00	136.96	0.0450	
80.00	138.63	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	135.39	.631E+02	0.1	0.44	12.42
0.31	135.55	.253E+03	0.5	0.69	7.83
0.47	135.71	.568E+03	1.6	0.91	5.97
0.65	135.89	.114E+04	4.2	1.20	4.52
0.84	136.07	.209E+04	8.7	1.35	4.02
1.02	136.25	.342E+04	15.4	1.47	3.70
1.20	136.44	.511E+04	24.8	1.58	3.44
1.38	136.62	.718E+04	37.2	1.69	3.21
1.57	136.80	.962E+04	53.1	1.79	3.02
1.75	136.98	.124E+05	72.7	1.90	2.85
1.93	137.17	.155E+05	97.8	2.05	2.64
2.11	137.35	.188E+05	127.1	2.20	2.47
2.30	137.53	.223E+05	160.4	2.34	2.31
2.48	137.71	.259E+05	197.8	2.48	2.19
2.66	137.90	.298E+05	239.5	2.61	2.07
2.85	138.08	.339E+05	285.4	2.74	1.98
3.03	138.26	.381E+05	335.6	2.86	1.89
3.21	138.44	.426E+05	390.3	2.98	1.82
3.39	138.63	.472E+05	449.4	3.10	1.75

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50090)	608.39	40.42	10.67	108.89	1.42	1.71
OUTFLOW: ID= 1 (60100)	608.39	40.39	10.67	108.89	1.42	1.71

CALIB	
STANDHYD (40100)	Area (ha)= 26.90
ID= 1 DT= 5.0 min	Total Imp(%)= 46.31 Dir. Conn.(%)= 42.42

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	12.46	14.44
Dep. Storage	(mm)=	2.00	6.20
Average Slope	(%)=	1.40	1.40
Length	(m)=	423.45	125.00
Mannings n	=	0.015	0.280

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83

	0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
	0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
	0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
	1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
	1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
	1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
	1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
	1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
	1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
	1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
	1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
	1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
	1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
	1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
	1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
	3.000	6.35	6.083	13.97	9.167	12.70		
	3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	55.78	
over (min)	10.00	30.00	
Storage Coeff. (min)=	7.72 (ii)	28.76 (ii)	
Unit Hyd. Tpeak (min)=	10.00	30.00	
Unit Hyd. peak (cms)=	0.13	0.04	
			TOTALS
PEAK FLOW (cms)=	1.67	1.95	3.544 (iii)
TIME TO PEAK (hrs)=	10.17	10.42	10.17
RUNOFF VOLUME (mm)=	210.34	187.83	197.38
TOTAL RAINFALL (mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT =	0.99	0.88	0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 92.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| READ HYD (0416)| AREA (ha)= 289.00
| DT= 5.0 min | TPEAK (hrs)= 11.17
VOLUME (mm)= 11.32

Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
Comments: HYDROGRAPH from Area 4 2D model_Pond 804 east berm - updated

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.000	4.83	0.000	9.67	0.000	14.50	0.005	19.33	0.000
0.08	0.000	4.92	0.000	9.75	0.000	14.58	0.004	19.42	0.000
0.17	0.000	5.00	0.000	9.83	0.000	14.67	0.004	19.50	0.000
0.25	0.000	5.08	0.000	9.92	0.000	14.75	0.004	19.58	0.000
0.33	0.000	5.17	0.000	10.00	0.000	14.83	0.004	19.67	0.000
0.42	0.000	5.25	0.000	10.08	0.000	14.92	0.003	19.75	0.000
0.50	0.000	5.33	0.000	10.17	0.000	15.00	0.003	19.83	0.000
0.58	0.000	5.42	0.000	10.25	0.000	15.08	0.003	19.92	0.000
0.67	0.000	5.50	0.000	10.33	0.100	15.17	0.003	20.00	0.000
0.75	0.000	5.58	0.000	10.42	0.271	15.25	0.003	20.08	0.000
0.83	0.000	5.67	0.000	10.50	0.831	15.33	0.002	20.17	0.000
0.92	0.000	5.75	0.000	10.58	2.162	15.42	0.002	20.25	0.000
1.00	0.000	5.83	0.000	10.67	3.843	15.50	0.002	20.33	0.000
1.08	0.000	5.92	0.000	10.75	5.565	15.58	0.002	20.42	0.000
1.17	0.000	6.00	0.000	10.83	6.966	15.67	0.002	20.50	0.000
1.25	0.000	6.08	0.000	10.92	7.939	15.75	0.002	20.58	0.000
1.33	0.000	6.17	0.000	11.00	8.528	15.83	0.002	20.67	0.000
1.42	0.000	6.25	0.000	11.08	8.849	15.92	0.001	20.75	0.000
1.50	0.000	6.33	0.000	11.17	8.954	16.00	0.001	20.83	0.000
1.58	0.000	6.42	0.000	11.25	8.885	16.08	0.001	20.92	0.000
1.67	0.000	6.50	0.000	11.33	8.588	16.17	0.001	21.00	0.000
1.75	0.000	6.58	0.000	11.42	8.003	16.25	0.001	21.08	0.000
1.83	0.000	6.67	0.000	11.50	7.152	16.33	0.001	21.17	0.000
1.92	0.000	6.75	0.000	11.58	6.109	16.42	0.001	21.25	0.000
2.00	0.000	6.83	0.000	11.67	4.882	16.50	0.001	21.33	0.000
2.08	0.000	6.92	0.000	11.75	3.745	16.58	0.001	21.42	0.000
2.17	0.000	7.00	0.000	11.83	2.680	16.67	0.001	21.50	0.000
2.25	0.000	7.08	0.000	11.92	1.849	16.75	0.001	21.58	0.000
2.33	0.000	7.17	0.000	12.00	1.251	16.83	0.001	21.67	0.000
2.42	0.000	7.25	0.000	12.08	0.810	16.92	0.001	21.75	0.000
2.50	0.000	7.33	0.000	12.17	0.473	17.00	0.001	21.83	0.000
2.58	0.000	7.42	0.000	12.25	0.236	17.08	0.001	21.92	0.000
2.67	0.000	7.50	0.000	12.33	0.088	17.17	0.001	22.00	0.000
2.75	0.000	7.58	0.000	12.42	0.018	17.25	0.000	22.08	0.000
2.83	0.000	7.67	0.000	12.50	0.011	17.33	0.000	22.17	0.000
2.92	0.000	7.75	0.000	12.58	0.007	17.42	0.000	22.25	0.000
3.00	0.000	7.83	0.000	12.67	0.012	17.50	0.000	22.33	0.000
3.08	0.000	7.92	0.000	12.75	0.019	17.58	0.000	22.42	0.000
3.17	0.000	8.00	0.000	12.83	0.020	17.67	0.000	22.50	0.000
3.25	0.000	8.08	0.000	12.92	0.016	17.75	0.000	22.58	0.000
3.33	0.000	8.17	0.000	13.00	0.012	17.83	0.000	22.67	0.000
3.42	0.000	8.25	0.000	13.08	0.012	17.92	0.000	22.75	0.000
3.50	0.000	8.33	0.000	13.17	0.011	18.00	0.000	22.83	0.000
3.58	0.000	8.42	0.000	13.25	0.011	18.08	0.000	22.92	0.000
3.67	0.000	8.50	0.000	13.33	0.011	18.17	0.000	23.00	0.000
3.75	0.000	8.58	0.000	13.42	0.008	18.25	0.000	23.08	0.000
3.83	0.000	8.67	0.000	13.50	0.009	18.33	0.000	23.17	0.000
3.92	0.000	8.75	0.000	13.58	0.008	18.42	0.000	23.25	0.000
4.00	0.000	8.83	0.000	13.67	0.008	18.50	0.000	23.33	0.000
4.08	0.000	8.92	0.000	13.75	0.008	18.58	0.000	23.42	0.000
4.17	0.000	9.00	0.000	13.83	0.007	18.67	0.000	23.50	0.000
4.25	0.000	9.08	0.000	13.92	0.007	18.75	0.000	23.58	0.000
4.33	0.000	9.17	0.000	14.00	0.006	18.83	0.000	23.67	0.000
4.42	0.000	9.25	0.000	14.08	0.006	18.92	0.000	23.75	0.000
4.50	0.000	9.33	0.000	14.17	0.006	19.00	0.000	23.83	0.000
4.58	0.000	9.42	0.000	14.25	0.006	19.08	0.000	23.92	0.000
4.67	0.000	9.50	0.000	14.33	0.005	19.17	0.000	24.00	0.000
4.75	0.000	9.58	0.000	14.42	0.005	19.25	0.000		

ADD HYD (50110)|	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (40100):		26.90	3.544	10.17	197.38
+ ID2= 2 (0416):		289.00	8.954	11.17	11.32
ID = 3 (50110):		315.90	11.852	11.17	27.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50110)|	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (50110):		315.90	11.852	11.17	27.16
+ ID2= 2 (60100):		608.39	40.393	10.67	108.89
ID = 1 (50110):		924.28	51.590	11.08	80.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (40120)		Area (ha)=	44.60	Curve Number (CN)=	91.0
ID= 1 DT= 5.0 min		Ia (mm)=	7.89	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.43		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)=	3.961		
PEAK FLOW (cms)=	5.850 (i)		
TIME TO PEAK (hrs)=	10.333		
RUNOFF VOLUME (mm)=	182.061		
TOTAL RAINFALL (mm)=	212.340		
RUNOFF COEFFICIENT =	0.857		

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (40130)		Area (ha)=	63.82	Curve Number (CN)=	92.0
ID= 1 DT= 5.0 min		Ia (mm)=	7.55	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.50		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Unit Hyd Qpeak (cms)=	4.875		
PEAK FLOW (cms)=	8.104 (i)		
TIME TO PEAK (hrs)=	10.417		
RUNOFF VOLUME (mm)=	184.844		
TOTAL RAINFALL (mm)=	212.340		
RUNOFF COEFFICIENT =	0.871		

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50130)|	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (40120):		44.60	5.850	10.33	182.06
+ ID2= 2 (40130):		63.82	8.104	10.42	184.84
ID = 3 (50130):		108.42	13.911	10.33	183.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60130)			
IN= 2---> OUT= 1	Routing time step (min)'=	5.00	

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	155.27	0.0450	
2.00	155.23	0.0450	
4.00	155.21	0.0450	
6.00	155.08	0.0450	
8.00	154.94	0.0450	
10.00	154.68	0.0450	
12.00	154.21	0.0450	
14.00	153.90	0.0450	
16.00	153.41	0.0350	Main Channel
18.00	153.58	0.0350	Main Channel
20.00	153.72	0.0350 /0.0450	Main Channel
22.00	153.77	0.0450	
24.00	153.77	0.0450	
26.00	153.82	0.0450	
28.00	153.79	0.0450	
30.00	153.87	0.0450	
32.00	153.99	0.0450	
34.00	154.44	0.0450	
36.00	154.86	0.0450	
40.00	155.37	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)

0.10	153.50	.107E+03	0.0	0.27	87.23	
0.20	153.60	.429E+03	0.1	0.42	55.65	
0.29	153.70	.991E+03	0.4	0.55	42.98	
0.39	153.80	.201E+04	0.9	0.66	35.52	
0.49	153.90	.408E+04	2.1	0.71	33.15	
0.59	153.99	.651E+04	3.7	0.81	29.01	
0.69	154.09	.916E+04	6.1	0.93	25.22	
0.79	154.19	.120E+05	8.9	1.05	22.39	
0.88	154.29	.149E+05	12.3	1.16	20.20	
0.98	154.39	.179E+05	16.2	1.27	18.49	
1.08	154.49	.211E+05	20.5	1.37	17.13	
1.18	154.58	.244E+05	25.4	1.47	16.02	
1.28	154.68	.278E+05	30.7	1.56	15.10	
1.37	154.78	.314E+05	36.4	1.63	14.38	
1.47	154.88	.351E+05	42.5	1.71	13.77	
1.57	154.98	.391E+05	48.9	1.76	13.33	
1.67	155.07	.433E+05	55.6	1.81	12.98	
1.77	155.17	.478E+05	63.0	1.86	12.65	
1.86	155.27	.528E+05	69.8	1.86	12.62	

	<---- hydrograph ---->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (50130)	108.42	13.91	10.33	183.70	0.92	1.21
OUTFLOW: ID= 1 (60130)	108.42	13.21	10.67	183.69	0.91	1.19

CALIB	
STANDHYD (40140)	Area (ha)= 65.76
ID= 1 DT= 5.0 min	Total Imp(%)= 71.00 Dir. Conn.(%)= 61.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	46.69	19.07
Dep. Storage (mm)=	2.00	6.30
Average Slope (%)=	1.30	1.30
Length (m)=	662.12	66.00
Mannings n =	0.015	0.290

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	69.98	
over	(min)	10.00	25.00	
Storage Coeff.	(min)=	10.32 (ii)	24.00 (ii)	
Unit Hyd. Tpeak	(min)=	10.00	25.00	
Unit Hyd. peak	(cms)=	0.11	0.05	
PEAK FLOW	(cms)=	5.87	3.36	9.175 (iii)
TIME TO PEAK	(hrs)=	10.17	10.33	10.17
RUNOFF VOLUME	(mm)=	210.34	188.59	201.86
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.89	0.95

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50180)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40140):	65.76	9.175	10.17	201.86
+ ID2= 2 (60130):	108.42	13.211	10.67	183.69
ID = 3 (50180):	174.18	20.858	10.42	190.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (40180)	Area (ha)= 13.89
ID= 1 DT= 5.0 min	Total Imp(%)= 76.00 Dir. Conn.(%)= 73.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.55	3.33
Dep. Storage (mm)=	2.00	6.90
Average Slope (%)=	1.00	1.00
Length (m)=	304.26	66.00
Mannings n =	0.015	0.310

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	58.17	
over	(min)	5.00	25.00	
Storage Coeff.	(min)=	7.01 (ii)	23.59 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	25.00	
Unit Hyd. peak	(cms)=	0.17	0.05	
PEAK FLOW	(cms)=	1.49	0.49	1.969 (iii)
TIME TO PEAK	(hrs)=	10.17	10.33	10.17
RUNOFF VOLUME	(mm)=	210.34	183.84	203.18
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.87	0.96

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (40190)	Area (ha)= 13.78
ID= 1 DT= 5.0 min	Total Imp(%)= 41.61 Dir. Conn.(%)= 38.64

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.74	8.05
Dep. Storage (mm)=	2.00	8.12
Average Slope (%)=	2.40	2.40
Length (m)=	303.13	131.00
Mannings n =	0.015	0.350

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	53.85	
over	(min)	5.00	30.00	
Storage Coeff.	(min)=	5.38 (ii)	26.72 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	30.00	
Unit Hyd. peak	(cms)=	0.21	0.04	
PEAK FLOW	(cms)=	0.78	1.06	1.805 (iii)
TIME TO PEAK	(hrs)=	10.17	10.42	10.17
RUNOFF VOLUME	(mm)=	210.34	178.54	190.83
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.84	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(60190)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	155.90	0.0450	
1.00	154.69	0.0450	
2.00	154.30	0.0450	
3.00	154.00	0.0450 /0.0350	Main Channel
4.00	153.74	0.0350	Main Channel
5.00	153.51	0.0350	Main Channel
6.00	153.46	0.0350	Main Channel
7.00	153.77	0.0350	Main Channel
8.00	154.10	0.0350 /0.0450	Main Channel
9.00	154.50	0.0450	
10.00	154.84	0.0450	
11.00	155.13	0.0450	
12.00	155.26	0.0450	
13.00	155.32	0.0450	
14.00	155.42	0.0450	
15.00	155.52	0.0450	
16.00	155.62	0.0450	
17.00	155.69	0.0450	
18.00	155.76	0.0450	
20.00	155.88	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	153.57	.445E+02	0.0	0.32	21.18
0.22	153.68	.135E+03	0.2	0.51	13.45
0.33	153.79	.262E+03	0.4	0.66	10.46
0.43	153.89	.423E+03	0.8	0.79	8.73
0.54	154.00	.616E+03	1.3	0.90	7.61
0.68	154.14	.900E+03	2.4	1.09	6.30
0.81	154.27	.123E+04	3.8	1.27	5.40

```
01837>        0.95   154.41    .160E+04       5.5          1.42       4.83
01838>        1.08   154.54    .201E+04       7.6          1.55       4.43
01839>        1.22   154.68    .246E+04       9.9          1.67       4.12
01840>        1.35   154.81    .294E+04      12.7          1.78       3.86
01841>        1.48   154.94    .345E+04      15.8          1.88       3.65
01842>        1.62   155.08    .400E+04      19.2          1.97       3.48
01843>        1.75   155.21    .458E+04      22.9          2.05       3.34
01844>        1.89   155.35    .524E+04      26.8          2.11       3.26
01845>        2.02   155.48    .599E+04      31.4          2.16       3.18
01846>        2.16   155.62    .682E+04      36.5          2.20       3.12
01847>        2.29   155.75    .774E+04      41.9          2.23       3.08
01848>        2.43   155.89    .878E+04      48.0          2.25       3.05
01849>
01850>                                        <---- hydrograph ---->   <-pipe / channel->
01851>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
01852>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
01853>    INFLOW : ID= 2 ( 40190)   13.78     1.80   10.17 190.83       0.60      0.98
01854>    OUTFLOW: ID= 1 ( 60190)   13.78     1.76   10.17 190.83       0.60      0.97
01855>
01856>
01857>
01858> ------------------------------------------------------------------------------
01859> --------------------
01860> | CALIB            |
01861> | STANDHYD ( 40200)|   Area    (ha)=  22.94
01862> |ID= 1 DT= 5.0 min |   Total Imp(%)=  75.90   Dir. Conn.(%)=  74.75
01863> --------------------
01864>                              IMPERVIOUS    PERVIOUS (i)
01865>      Surface Area     (ha)=      17.41         5.53
01866>      Dep. Storage     (mm)=       2.00         6.75
01867>      Average Slope     (%)=       3.00         3.00
01868>      Length            (m)=     391.08       150.00
01869>      Mannings n            =      0.015        0.290
01870>
01871>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
01872>
01873>
01874>                              ---- TRANSFORMED HYETOGRAPH ----
01875>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
01876>                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
01877>                0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
01878>                0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
01879>                0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
01880>                0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
01881>                0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
01882>                0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
01883>                0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
01884>                0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
01885>                0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
01886>                0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
01887>                0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
01888>                1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
01889>                1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
01890>                1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
01891>                1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
01892>                1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
01893>                1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
01894>                1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
01895>                1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
01896>                1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
01897>                1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
01898>                1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
01899>                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
01900>                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
01901>                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
01902>                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
01903>                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
01904>                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
01905>                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
01906>                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
01907>                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
01908>                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
01909>                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
01910>                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
01911>                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
01912>                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
01913>                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
01914>
01915>      Max.Eff.Inten.(mm/hr)=      52.83        54.01
01916>                over (min)        5.00        30.00
01917>      Storage Coeff.  (min)=      5.86 (ii)   25.17 (ii)
01918>      Unit Hyd. Tpeak (min)=      5.00        30.00
01919>      Unit Hyd. peak  (cms)=      0.20         0.04
01920>                                                          *TOTALS*
01921>      PEAK FLOW       (cms)=      2.52         0.74          3.233 (iii)
01922>      TIME TO PEAK    (hrs)=     10.17        10.33         10.17
01923>      RUNOFF VOLUME    (mm)=    210.34       182.08        203.20
01924>      TOTAL RAINFALL   (mm)=    212.34       212.34        212.34
01925>      RUNOFF COEFFICIENT   =      0.99         0.86          0.96
01926>
01927>
01928>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
01929>            CN*  =  90.0    Ia = Dep. Storage  (Above)
01930>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
01931>            THAN THE STORAGE COEFFICIENT.
01932>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
01933>
01934> ------------------------------------------------------------------------------
01935>
01936> --------------------
01937> | ADD HYD  ( 50200)|
01938> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
01939> --------------------         (ha)    (cms)    (hrs)     (mm)
01940>        ID1= 1 ( 40180):    13.89    1.969    10.17   203.18
01941>      + ID2= 2 ( 40200):    22.94    3.233    10.17   203.20
01942>        ================================================
01943>        ID = 3 ( 50200):    36.83    5.202    10.17   203.20
01944>
01945>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01946> ------------------------------------------------------------------------------
01947>
01948> --------------------
01949> | ADD HYD  ( 50200)|
01950> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
01951> --------------------         (ha)    (cms)    (hrs)     (mm)
01952>        ID1= 3 ( 50200):    36.83    5.202    10.17   203.20
01953>      + ID2= 2 ( 60190):    13.78    1.762    10.17   190.83
01954>        ================================================
01955>        ID = 1 ( 50200):    50.61    6.964    10.17   199.83
01956>
01957>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
01958> ------------------------------------------------------------------------------
01959> --------------------
01960> | CALIB            |
01961> | STANDHYD ( 40210)|   Area    (ha)=   6.07
01962> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.51   Dir. Conn.(%)=  81.77
01963> --------------------
01964>                              IMPERVIOUS    PERVIOUS (i)
01965>      Surface Area     (ha)=       5.01         1.06
01966>      Dep. Storage     (mm)=       2.00         6.27
01967>      Average Slope     (%)=       0.90         0.90
01968>      Length            (m)=     201.21       118.00
01969>      Mannings n            =      0.015        0.290
01970>
01971>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
01972>
01973>
01974>                              ---- TRANSFORMED HYETOGRAPH ----
01975>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
01976>                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
01977>                0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
01978>                0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
01979>                0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
01980>                0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
01981>                0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
01982>                0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
01983>                0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
01984>                0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
01985>                0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
01986>                0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
01987>                0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
01988>                1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
01989>                1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
01990>                1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
01991>                1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
01992>                1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
01993>                1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
01994>                1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
01995>                1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
01996>                1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
01997>                1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
01998>                1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
01999>                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
02000>                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
02001>                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
02002>                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
02003>                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
02004>                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
02005>                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
02006>                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
02007>                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
02008>                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
02009>                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
02010>                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
02011>                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
02012>                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
02013>                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
02014>
02015>      Max.Eff.Inten.(mm/hr)=      52.83        53.69
02016>                over (min)        5.00        30.00
02017>      Storage Coeff.  (min)=      5.64 (ii)   29.70 (ii)
02018>      Unit Hyd. Tpeak (min)=      5.00        30.00
02019>      Unit Hyd. peak  (cms)=      0.20         0.04
02020>                                                          *TOTALS*
02021>      PEAK FLOW       (cms)=      0.73         0.14          0.860 (iii)
02022>      TIME TO PEAK    (hrs)=     10.17        10.42         10.17
02023>      RUNOFF VOLUME    (mm)=    210.34       182.39        205.24
02024>      TOTAL RAINFALL   (mm)=    212.34       212.34        212.34
02025>      RUNOFF COEFFICIENT   =      0.99         0.86          0.97
02026>
02027>
02028>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
02029>            CN*  =  90.0    Ia = Dep. Storage  (Above)
02030>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
02031>            THAN THE STORAGE COEFFICIENT.
02032>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
02033>
02034> ------------------------------------------------------------------------------
02035>
02036> --------------------
02037> | ADD HYD  ( 50210)|
02038> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
02039> --------------------         (ha)    (cms)    (hrs)     (mm)
02040>        ID1= 1 ( 40210):     6.07    0.860    10.17   205.24
02041>      + ID2= 2 ( 50200):    50.61    6.964    10.17   199.83
02042>        ================================================
02043>        ID = 3 ( 50210):    56.68    7.824    10.17   200.41
02044>
02045>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
02046> ------------------------------------------------------------------------------
02047> --------------------
02048> | ROUTE CHN( 60210)|
02049> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
02050> --------------------
02051>                  <------ DATA FOR SECTION (   1.1) ------>
02052>                 Distance      Elevation       Manning
02053>                    0.00         152.62         0.0450
02054>                    7.00         152.39         0.0450
02055>                    8.00         152.02         0.0450
02056>                    9.00         151.48         0.0450
02057>                   10.00         151.01         0.0450
02058>                   11.00         150.56    0.0450 /0.0350  Main Channel
02059>                   12.00         150.38         0.0350      Main Channel
02060>                   13.00         150.40         0.0350      Main Channel
02061>                   14.00         150.36         0.0350      Main Channel
02062>                   15.00         150.60    0.0350 /0.0450  Main Channel
02063>                   16.00         150.99         0.0450
02064>                   17.00         151.50         0.0450
02065>                   18.00         151.91         0.0450
02066>                   19.00         152.65         0.0450
02067>
02068>       <---------- TRAVEL TIME TABLE ---------->
02069>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
02070>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
02071>         0.10  150.46    .580E+02        0.1          0.30      17.06
02072>         0.20  150.56    .160E+03        0.3          0.48      10.57
02073>         0.32  150.68    .314E+03        0.7          0.70       7.18
02074>         0.44  150.80    .489E+03        1.4          0.89       5.71
02075>         0.56  150.92    .686E+03        2.3          1.03       4.89
02076>         0.69  151.04    .904E+03        3.5          1.16       4.35
02077>         0.81  151.16    .114E+04        4.8          1.28       3.95
02078>         0.93  151.29    .140E+04        6.4          1.38       3.66
02079>         1.05  151.41    .167E+04        8.1          1.48       3.42
02080>         1.17  151.53    .196E+04       10.1          1.57       3.22
02081>         1.29  151.65    .227E+04       12.3          1.65       3.06
02082>         1.41  151.77    .260E+04       14.8          1.73       2.93
02083>         1.54  151.89    .295E+04       17.5          1.80       2.81
02084>         1.66  152.01    .331E+04       20.4          1.87       2.70
02085>         1.78  152.13    .369E+04       23.6          1.94       2.61
02086>         1.90  152.26    .409E+04       27.0          2.00       2.52
02087>         2.02  152.38    .451E+04       30.7          2.06       2.45
02088>         2.14  152.50    .500E+04       33.4          2.03       2.49
02089>         2.26  152.62    .563E+04       37.3          2.01       2.51
02090>
02091>                                        <---- hydrograph ---->   <-pipe / channel->
02092>                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
02093>                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
02094>    INFLOW : ID= 2 ( 50210)   56.68     7.82   10.17 200.41       1.03      1.46
02095>    OUTFLOW: ID= 1 ( 60210)   56.68     7.78   10.17 200.41       1.03      1.46
02096>
02097>
02098>
02099> ------------------------------------------------------------------------------
02100> --------------------
02101> | CALIB            |
02102> | STANDHYD ( 40220)|   Area    (ha)=  11.32
02103> |ID= 1 DT= 5.0 min |   Total Imp(%)=  78.77   Dir. Conn.(%)=  77.76
02104> --------------------
02105>                              IMPERVIOUS    PERVIOUS (i)
02106>      Surface Area     (ha)=       8.91         2.40
02107>      Dep. Storage     (mm)=       2.00         6.17
02108>      Average Slope     (%)=       0.60         0.60
02109>      Length            (m)=     274.66        79.00
02110>      Mannings n            =      0.015        0.290
02111>
02112>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
02113>
02114>
02115>                              ---- TRANSFORMED HYETOGRAPH ----
02116>                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
02117>                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
02118>                0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
02119>                0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
02120>                0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
02121>                0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
02122>                0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
02123>                0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
02124>                0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
02125>                0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
02126>                0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
02127>                0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
02128>                0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
02129>                1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
02130>                1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
02131>                1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
02132>                1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
02133>                1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
02134>                1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
02135>                1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
02136>                1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
02137>                1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
02138>                1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
02139>                1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
02140>                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
02141>                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
02142>                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
```

```
                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.98
                   over (min)       10.00        30.00
     Storage Coeff.  (min)=        7.68 (ii)   28.99 (ii)
     Unit Hyd. Tpeak (min)=       10.00        30.00
     Unit Hyd. peak  (cms)=        0.13         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=        1.29         0.31          1.590 (iii)
     TIME TO PEAK    (hrs)=       10.17        10.42         10.17
     RUNOFF VOLUME    (mm)=      210.34       182.62        204.17
     TOTAL RAINFALL   (mm)=      212.34       212.34        212.34
     RUNOFF COEFFICIENT   =        0.99         0.86          0.96

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50120)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40220):    11.32    1.590    10.17   204.17
      + ID2= 2 ( 60210):    56.68    7.779    10.17   200.41
        ================================================
        ID = 3 ( 50120):    68.00    9.370    10.17   201.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| READ HYD (  0414)|   AREA       (ha)= 289.00
| DT= 5.0 min      |   TPEAK     (hrs)=  10.25
--------------------   VOLUME     (mm)=  28.88
  Filename: Q:\52982\104\SWM\Hydrology_VO Modelling\2025-04-25_Sheldon & Bronte
  Comments: HYDROGRAPH from Area 4 2D model_Pond 804 east berm - updated

   TIME    FLOW |  TIME    FLOW |  TIME    FLOW |'  TIME    FLOW |  TIME    FLOW
    hrs     cms |   hrs     cms |   hrs     cms |'   hrs     cms |   hrs     cms
   0.00   0.000 |  4.83   0.219 |  9.67   4.326 | 14.50   0.000 | 19.33   0.000
   0.08   0.000 |  4.92   0.380 |  9.75   4.966 | 14.58   0.000 | 19.42   0.000
   0.17   0.000 |  5.00   0.517 |  9.83   5.613 | 14.67   0.000 | 19.50   0.000
   0.25   0.000 |  5.08   0.670 |  9.92   6.345 | 14.75   0.000 | 19.58   0.000
   0.33   0.000 |  5.17   0.805 | 10.00   7.412 | 14.83   0.000 | 19.67   0.000
   0.42   0.000 |  5.25   0.846 | 10.08   8.509 | 14.92   0.000 | 19.75   0.000
   0.50   0.000 |  5.33   0.850 | 10.17   8.992 | 15.00   0.000 | 19.83   0.000
   0.58   0.000 |  5.42   0.850 | 10.25   9.061 | 15.08   0.000 | 19.92   0.000
   0.67   0.000 |  5.50   0.848 | 10.33   8.959 | 15.17   0.000 | 20.00   0.000
   0.75   0.000 |  5.58   0.847 | 10.42   8.845 | 15.25   0.000 | 20.08   0.000
   0.83   0.000 |  5.67   0.848 | 10.50   8.727 | 15.33   0.000 | 20.17   0.000
   0.92   0.000 |  5.75   0.849 | 10.58   8.613 | 15.42   0.000 | 20.25   0.000
   1.00   0.000 |  5.83   0.852 | 10.67   8.510 | 15.50   0.000 | 20.33   0.000
   1.08   0.000 |  5.92   0.855 | 10.75   8.414 | 15.58   0.000 | 20.42   0.000
   1.17   0.000 |  6.00   0.858 | 10.83   8.327 | 15.67   0.000 | 20.50   0.000
   1.25   0.000 |  6.08   0.862 | 10.92   8.246 | 15.75   0.000 | 20.58   0.000
   1.33   0.000 |  6.17   0.882 | 11.00   8.170 | 15.83   0.000 | 20.67   0.000
   1.42   0.000 |  6.25   0.944 | 11.08   8.091 | 15.92   0.000 | 20.75   0.000
   1.50   0.000 |  6.33   1.047 | 11.17   7.859 | 16.00   0.000 | 20.83   0.000
   1.58   0.000 |  6.42   1.170 | 11.25   7.261 | 16.08   0.000 | 20.92   0.000
   1.67   0.000 |  6.50   1.301 | 11.33   6.410 | 16.17   0.000 | 21.00   0.000
   1.75   0.000 |  6.58   1.446 | 11.42   5.456 | 16.25   0.000 | 21.08   0.000
   1.83   0.000 |  6.67   1.582 | 11.50   4.646 | 16.33   0.000 | 21.17   0.000
   1.92   0.000 |  6.75   1.707 | 11.58   4.145 | 16.42   0.000 | 21.25   0.000
   2.00   0.000 |  6.83   1.824 | 11.67   3.772 | 16.50   0.000 | 21.33   0.000
   2.08   0.000 |  6.92   1.912 | 11.75   3.389 | 16.58   0.000 | 21.42   0.000
   2.17   0.000 |  7.00   1.969 | 11.83   2.994 | 16.67   0.000 | 21.50   0.000
   2.25   0.000 |  7.08   2.011 | 11.92   2.724 | 16.75   0.000 | 21.58   0.000
   2.33   0.000 |  7.17   2.026 | 12.00   2.503 | 16.83   0.000 | 21.67   0.000
   2.42   0.000 |  7.25   1.980 | 12.08   2.280 | 16.92   0.000 | 21.75   0.000
   2.50   0.000 |  7.33   1.896 | 12.17   2.038 | 17.00   0.000 | 21.83   0.000
   2.58   0.000 |  7.42   1.809 | 12.25   1.757 | 17.08   0.000 | 21.92   0.000
   2.67   0.000 |  7.50   1.736 | 12.33   1.485 | 17.17   0.000 | 22.00   0.000
   2.75   0.000 |  7.58   1.672 | 12.42   1.239 | 17.25   0.000 | 22.08   0.000
   2.83   0.000 |  7.67   1.602 | 12.50   1.003 | 17.33   0.000 | 22.17   0.000
   2.92   0.000 |  7.75   1.522 | 12.58   0.778 | 17.42   0.000 | 22.25   0.000
   3.00   0.000 |  7.83   1.440 | 12.67   0.582 | 17.50   0.000 | 22.33   0.000
   3.08   0.000 |  7.92   1.362 | 12.75   0.422 | 17.58   0.000 | 22.42   0.000
   3.17   0.000 |  8.00   1.297 | 12.83   0.305 | 17.67   0.000 | 22.50   0.000
   3.25   0.000 |  8.08   1.242 | 12.92   0.186 | 17.75   0.000 | 22.58   0.000
   3.33   0.000 |  8.17   1.191 | 13.00   0.128 | 17.83   0.000 | 22.67   0.000
   3.42   0.000 |  8.25   1.145 | 13.08   0.082 | 17.92   0.000 | 22.75   0.000
   3.50   0.000 |  8.33   1.105 | 13.17   0.045 | 18.00   0.000 | 22.83   0.000
   3.58   0.000 |  8.42   1.068 | 13.25   0.022 | 18.08   0.000 | 22.92   0.000
   3.67   0.000 |  8.50   1.035 | 13.33   0.013 | 18.17   0.000 | 23.00   0.000
   3.75   0.000 |  8.58   1.005 | 13.42   0.007 | 18.25   0.000 | 23.08   0.000
   3.83   0.000 |  8.67   0.977 | 13.50   0.003 | 18.33   0.000 | 23.17   0.000
   3.92   0.000 |  8.75   0.952 | 13.58   0.001 | 18.42   0.000 | 23.25   0.000
   4.00   0.000 |  8.83   0.930 | 13.67   0.000 | 18.50   0.000 | 23.33   0.000
   4.08   0.000 |  8.92   0.910 | 13.75   0.000 | 18.58   0.000 | 23.42   0.000
   4.17   0.000 |  9.00   0.893 | 13.83   0.000 | 18.67   0.000 | 23.50   0.000
   4.25   0.000 |  9.08   0.878 | 13.92   0.000 | 18.75   0.000 | 23.58   0.000
   4.33   0.000 |  9.17   0.938 | 14.00   0.000 | 18.83   0.000 | 23.67   0.000
   4.42   0.002 |  9.25   1.201 | 14.08   0.000 | 18.92   0.000 | 23.75   0.000
   4.50   0.008 |  9.33   1.748 | 14.17   0.000 | 19.00   0.000 | 23.83   0.000
   4.58   0.022 |  9.42   2.406 | 14.25   0.000 | 19.08   0.000 | 23.92   0.000
   4.67   0.069 |  9.50   3.002 | 14.33   0.000 | 19.17   0.000 | 24.00   0.000
   4.75   0.133 |  9.58   3.643 | 14.42   0.000 | 19.25   0.000 |

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--------------------
| ADD HYD  ( 50140)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 0414):    289.00    9.061    10.25    28.88
      + ID2= 2 ( 50120):    68.00    9.370    10.17   201.03
        ================================================
        ID = 3 ( 50140):   357.00   18.362    10.17    61.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50140)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50140):   357.00   18.362    10.17    61.67
      + ID2= 2 ( 50180):   174.18   20.858    10.42   190.55
        ================================================
        ID = 1 ( 50140):   531.18   38.765    10.25   103.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60140)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         152.29        0.0450
                    2.00         152.20        0.0450
                    4.00         152.17        0.0450
                    6.00         152.15        0.0450
                    8.00         151.78        0.0450
                   10.00         151.28        0.0450
                   12.00         150.79        0.0450
                   14.00         150.20    0.0450 /0.0350  Main Channel
                   16.00         149.82        0.0350      Main Channel
                   18.00         149.51        0.0350      Main Channel
                   20.00         149.24        0.0350      Main Channel
                   22.00         149.48        0.0350      Main Channel
                   24.00         150.00    0.0350 /0.0450  Main Channel
                   26.00         150.52        0.0450
                   28.00         151.14        0.0450
                   30.00         151.68        0.0450
                   32.00         152.11        0.0450
                   34.00         152.20        0.0450
                   35.00         152.27        0.0450
                   38.00         152.30        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)    (cu.m.)       (cms)        (m/s)       (min)
        0.15   149.39   .694E+02         0.1         0.32       19.63
        0.31   149.54   .273E+03         0.4         0.53       11.92
        0.46   149.70   .577E+03         1.1         0.72        8.87
        0.61   149.85   .972E+03         2.2         0.87        7.30
        0.76   150.00   .145E+04         3.9         1.01        6.26
        0.93   150.16   .205E+04         6.4         1.18        5.36
        1.09   150.33   .274E+04         9.9         1.37        4.62
        1.25   150.49   .350E+04        14.2         1.54        4.11
        1.42   150.65   .434E+04        19.3         1.69        3.75
        1.58   150.82   .524E+04        25.2         1.83        3.47
        1.74   150.98   .621E+04        31.8         1.95        3.26
        1.91   151.14   .726E+04        39.2         2.06        3.09
        2.07   151.31   .839E+04        47.5         2.16        2.94
        2.23   151.47   .959E+04        56.6         2.25        2.82
        2.40   151.63   .109E+05        66.7         2.34        2.72
        2.56   151.80   .122E+05        77.6         2.41        2.63
        2.72   151.96   .137E+05        89.3         2.48        2.55
        2.89   152.12   .153E+05       102.0         2.55        2.49
        3.05   152.29   .172E+05       111.6         2.47        2.57

                                        <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50140)  531.18    38.77    10.25 103.93      1.90      2.05
   OUTFLOW: ID= 1 ( 60140)  531.18    38.70    10.25 103.93      1.89      2.05

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--------------------
| ROUTE CHN( 60150)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         151.02        0.0450
                    2.00         150.89        0.0450
                    4.00         150.73        0.0450
                    6.00         150.65        0.0450
                    8.00         150.38        0.0450
                   10.00         149.93        0.0450
                   12.00         149.51        0.0450
                   14.00         149.02    0.0450 /0.0350  Main Channel
                   16.00         148.64        0.0350      Main Channel
                   18.00         148.27        0.0350      Main Channel
                   20.00         148.39        0.0350      Main Channel
                   22.00         148.60        0.0350      Main Channel
                   24.00         148.94    0.0350 /0.0450  Main Channel
                   26.00         149.34        0.0450
                   28.00         149.66        0.0450
                   30.00         150.12        0.0450
                   32.00         150.45        0.0450
                   34.00         150.52        0.0450
                   36.00         150.60        0.0450
                   38.00         150.60        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)    (cu.m.)       (cms)        (m/s)       (min)
        0.11   148.38   .283E+02         0.0         0.26       13.34
        0.22   148.49   .107E+03         0.2         0.44        7.98
        0.34   148.60   .226E+03         0.6         0.58        6.07
        0.45   148.72   .380E+03         1.3         0.72        4.90
        0.56   148.83   .563E+03         2.2         0.84        4.20
        0.67   148.94   .775E+03         3.5         0.95        3.72
        0.80   149.07   .105E+04         5.5         1.11        3.17
        0.93   149.20   .136E+04         8.2         1.27        2.77
        1.06   149.32   .170E+04        11.3         1.41        2.50
        1.18   149.45   .207E+04        14.9         1.52        2.31
        1.31   149.58   .248E+04        19.1         1.63        2.17
        1.44   149.71   .292E+04        23.8         1.72        2.05
        1.57   149.83   .340E+04        29.1         1.81        1.95
        1.70   149.96   .391E+04        34.9         1.89        1.87
        1.82   150.09   .445E+04        41.4         1.97        1.79
        1.95   150.22   .502E+04        48.4         2.04        1.73
        2.08   150.35   .563E+04        56.0         2.10        1.67
        2.21   150.47   .628E+04        63.9         2.15        1.64
        2.33   150.60   .702E+04        71.1         2.14        1.64

                                        <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 60140)  531.18    38.70    10.25 103.93      1.77      1.93
   OUTFLOW: ID= 1 ( 60150)  531.18    38.55    10.25 103.93      1.77      1.93

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| CALIB            |
| STANDHYD ( 40150)|   Area     (ha)=   5.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.84   Dir. Conn.(%)=  52.13
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        3.11          2.26
     Dep. Storage     (mm)=        2.00          6.34
     Average Slope     (%)=        2.30          2.30
     Length            (m)=      189.18         45.00
     Mannings n             =      0.015         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
     hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
   0.083     0.00 | 3.167     6.35 | 6.250    23.11 |  9.33    52.83
   0.167     0.00 | 3.250    12.70 | 6.333    23.11 |  9.42    52.83
   0.250     6.35 | 3.333    12.70 | 6.417    23.11 |  9.50    52.83
   0.333     6.35 | 3.417    12.70 | 6.500    23.11 |  9.58    52.83
   0.417     6.35 | 3.500    12.70 | 6.583    23.11 |  9.67    52.83
   0.500     6.35 | 3.583    12.70 | 6.667    23.11 |  9.75    52.83
   0.583     6.35 | 3.667    12.70 | 6.750    23.11 |  9.83    52.83
   0.667     6.35 | 3.750    12.70 | 6.833    23.11 |  9.92    52.83
   0.750     6.35 | 3.833    12.70 | 6.917    23.11 | 10.00    52.83
   0.833     6.35 | 3.917    12.70 | 7.000    23.11 | 10.08    52.83
   0.917     6.35 | 4.000    12.70 | 7.083    23.11 | 10.17    52.83
   1.000     6.35 | 4.083    12.70 | 7.167    23.11 | 10.25    37.85
   1.083     6.35 | 4.167    12.70 | 7.250    12.70 | 10.33    37.85
   1.167     6.35 | 4.250    16.76 | 7.333    12.70 | 10.42    37.85
   1.250     4.32 | 4.333    16.76 | 7.417    12.70 | 10.50    37.85
   1.333     4.32 | 4.417    16.76 | 7.500    12.70 | 10.58    37.85
   1.417     4.32 | 4.500    16.76 | 7.583    12.70 | 10.67    37.85
   1.500     4.32 | 4.583    16.76 | 7.667    12.70 | 10.75    37.85
   1.583     4.32 | 4.667    16.76 | 7.750    12.70 | 10.83    37.85
   1.667     4.32 | 4.750    16.76 | 7.833    12.70 | 10.92    37.85
   1.750     4.32 | 4.833    16.76 | 7.917    12.70 | 11.00    37.85
   1.833     4.32 | 4.917    16.76 | 8.000    12.70 | 11.08    37.85
   1.917     4.32 | 5.000    16.76 | 8.083    12.70 | 11.17    37.85
   2.000     4.32 | 5.083    16.76 | 8.167    12.70 | 11.25    12.70
   2.083     4.32 | 5.167    16.76 | 8.250    12.70 | 11.33    12.70
   2.167     4.32 | 5.250    13.97 | 8.333    12.70 | 11.42    12.70
   2.250     6.35 | 5.333    13.97 | 8.417    12.70 | 11.50    12.70
   2.333     6.35 | 5.417    13.97 | 8.500    12.70 | 11.58    12.70
   2.417     6.35 | 5.500    13.97 | 8.583    12.70 | 11.67    12.70
   2.500     6.35 | 5.583    13.97 | 8.667    12.70 | 11.75    12.70
   2.583     6.35 | 5.667    13.97 | 8.750    12.70 | 11.83    12.70
   2.667     6.35 | 5.750    13.97 | 8.833    12.70 | 11.92    12.70
   2.750     6.35 | 5.833    13.97 | 8.917    12.70 | 12.00    12.70
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                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        58.80
                   over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.10 (ii)   13.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.24         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.41         0.36          0.773 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       184.57         198.00
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.87           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50160)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40150):     5.37    0.773    10.17   198.00
     + ID2= 2 ( 60150):   531.18   38.547    10.25   103.93
       ==================================================
       ID = 3 ( 50160):   536.54   39.232    10.25   104.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| STANDHYD ( 40240)|   Area     (ha)=  10.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.45   Dir. Conn.(%)=  84.88
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.79         1.50
     Dep. Storage     (mm)=       2.00         5.70
     Average Slope     (%)=       3.40         3.40
     Length            (m)=     261.85        70.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.60
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.43 (ii)   15.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.23         0.07
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.28         0.21          1.496 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       182.85         206.18
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.86           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40250)|   Area     (ha)=  13.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  64.44   Dir. Conn.(%)=  62.89
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.61         4.75
     Dep. Storage     (mm)=       2.00         7.14
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     298.43        70.00
     Mannings n           =      0.015        0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.56
                   over (min)        5.00        25.00
     Storage Coeff.  (min)=       5.62 (ii)   20.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.20         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.23         0.66          1.883 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25          10.17
     RUNOFF VOLUME    (mm)=     210.34       179.26         198.80
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.84           0.94


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60240)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         155.56        0.0450
                    2.00         155.23        0.0450
                    4.00         154.58        0.0450
                    6.00         153.92        0.0450
                    8.00         153.53        0.0450
                   10.00         152.64        0.0450
                   12.00         152.43    0.0450 /0.0350  Main Channel
                   14.00         152.24        0.0350      Main Channel
                   16.00         152.07        0.0350      Main Channel
                   18.00         152.30    0.0350 /0.0450  Main Channel
                   20.00         152.46        0.0450
                   22.00         155.55        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.12   152.18    .895E+02        0.1         0.43       24.33
        0.24   152.30    .356E+03        0.4         0.69       15.20
        0.43   152.49    .118E+04        2.1         1.10        9.55
        0.62   152.68    .234E+04        5.5         1.48        7.09
        0.81   152.88    .361E+04       10.4         1.83        5.76
        1.00   153.07    .494E+04       16.7         2.13        4.94
        1.19   153.26    .634E+04       24.2         2.40        4.38
        1.38   153.45    .781E+04       32.8         2.65        3.97
        1.58   153.64    .936E+04       42.5         2.86        3.67
        1.77   153.83    .110E+05       53.3         3.05        3.45
        1.96   154.02    .128E+05       65.6         3.23        3.26
        2.15   154.21    .147E+05       79.4         3.40        3.09
        2.34   154.40    .167E+05       94.5         3.57        2.95
        2.53   154.60    .188E+05      111.0         3.73        2.82
        2.72   154.79    .209E+05      128.7         3.89        2.71
        2.91   154.98    .231E+05      147.8         4.03        2.61
        3.10   155.17    .255E+05      168.3         4.17        2.52
        3.30   155.36    .279E+05      189.2         4.28        2.46
        3.49   155.55    .305E+05      211.3         4.38        2.40

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40250)   13.36     1.88   10.17 198.80      0.41      1.04
   OUTFLOW: ID= 1 ( 60240)   13.36     1.87   10.17 198.80      0.41      1.03


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--------------------
| ADD HYD  ( 50250)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40240):    10.28    1.496    10.17   206.18
     + ID2= 2 ( 50160):   536.54   39.232    10.25   104.88
       ==================================================
       ID = 3 ( 50250):   546.83   40.482    10.25   106.78

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  ( 50250)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 ( 50250):   546.83   40.482    10.25   106.78
     + ID2= 2 ( 60240):    13.36    1.868    10.17   198.80
       ==================================================
       ID = 1 ( 50250):   560.19   42.290    10.25   108.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60250)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         149.47        0.0450
                    3.00         149.39        0.0450
                    6.00         149.18        0.0450
                    9.00         148.85        0.0450
                   12.00         148.60        0.0450
                   15.00         148.16        0.0450
                   18.00         147.81        0.0450
                   21.00         147.50        0.0450
                   24.00         147.26        0.0350      Main Channel
                   27.00         146.88        0.0350      Main Channel
                   30.00         146.72        0.0350      Main Channel
                   33.00         147.27    0.0350 /0.0450  Main Channel
                   36.00         147.60        0.0450
                   39.00         147.71        0.0450
                   42.00         148.10        0.0450
                   45.00         148.90        0.0450
                   48.00         149.05        0.0450
                   51.00         149.12        0.0450
                   54.00         149.43        0.0450
                   57.00         149.67        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV       VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)      (cu.m.)      (cms)        (m/s)      (min)
        0.14   146.85    .156E+03        0.1         0.30       40.24
        0.27   146.99    .583E+03        0.4         0.51       23.51
        0.41   147.13    .119E+04        1.1         0.68       17.78
        0.54   147.26    .198E+04        2.2         0.82       14.76
        0.69   147.41    .309E+04        4.3         1.02       11.88
        0.84   147.56    .455E+04        7.2         1.15       10.50
        0.98   147.70    .637E+04       10.9         1.24        9.73
        1.13   147.85    .862E+04       15.8         1.32        9.12
        1.28   148.00    .111E+05       21.7         1.41        8.55
        1.42   148.14    .139E+05       28.7         1.50        8.06
```

	1.57	148.29	.169E+05	37.1	1.59	7.58
	1.72	148.44	.200E+05	46.5	1.68	7.16
	1.87	148.58	.233E+05	57.0	1.77	6.80
	2.01	148.73	.268E+05	68.3	1.85	6.53
	2.16	148.88	.305E+05	80.9	1.92	6.28
	2.31	149.02	.345E+05	93.2	1.95	6.17
	2.45	149.17	.391E+05	106.6	1.97	6.11
	2.60	149.32	.441E+05	123.2	2.02	5.97
	2.75	149.47	.495E+05	139.7	2.04	5.91

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		<---- hydrograph ---->			<-pipe / channel->	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (50250)	560.19	42.29	10.25	108.98	1.65	1.64
OUTFLOW: ID= 1 (60250)	560.19	41.51	10.33	108.98	1.64	1.63

CALIB	
STANDHYD (40260)	Area (ha)= 28.45
ID= 1 DT= 5.0 min	Total Imp(%)= 56.00 Dir. Conn.(%)= 43.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	15.93	12.52
Dep. Storage	(mm)=	2.00	6.70
Average Slope	(%)=	1.30	1.30
Length	(m)=	435.49	46.00
Mannings n	=	0.015	0.300

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

			TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	67.11	
over	(min)	10.00	20.00	
Storage Coeff.	(min)=	8.03 (ii)	19.46 (ii)	
Unit Hyd. Tpeak	(min)=	10.00	20.00	
Unit Hyd. peak	(cms)=	0.13	0.06	
PEAK FLOW	(cms)=	1.79	2.20	3.987 (iii)
TIME TO PEAK	(hrs)=	10.17	10.25	10.17
RUNOFF VOLUME	(mm)=	210.34	185.47	196.17
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.87	0.92

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50260)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40260):	28.45	3.987	10.17	196.17
+ ID2= 2 (60250):	560.19	41.511	10.33	108.98
ID = 3 (50260):	588.64	45.184	10.33	113.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60260)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	143.17	0.0450	
4.00	143.15	0.0450	
8.00	143.14	0.0450	
12.00	142.95	0.0450	
16.00	142.87	0.0450	
20.00	142.67	0.0450	
24.00	142.24	0.0450	
28.00	141.84	0.0450	
32.00	141.61	0.0450	
36.00	141.32	0.0450	
40.00	140.98	0.0450	
44.00	140.88	0.0450	
48.00	139.95	0.0350	Main Channel
52.00	140.09	0.0350	Main Channel
56.00	141.11	0.0450	
60.00	141.43	0.0450	
76.00	143.21	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	140.12	.479E+03	0.2	0.48	36.89
0.34	140.29	.147E+04	1.2	0.86	20.63
0.51	140.46	.272E+04	2.9	1.12	15.78
0.68	140.63	.421E+04	5.3	1.33	13.28
0.85	140.80	.596E+04	8.5	1.51	11.69
1.02	140.97	.812E+04	12.0	1.56	11.29
1.19	141.14	.111E+05	17.6	1.68	10.52
1.36	141.31	.147E+05	25.4	1.83	9.67
1.53	141.48	.191E+05	34.9	1.93	9.14
1.70	141.65	.242E+05	46.4	2.03	8.71
1.87	141.81	.301E+05	59.9	2.11	8.38
2.04	141.98	.367E+05	76.6	2.21	7.99
2.21	142.15	.439E+05	95.9	2.31	7.63
2.37	142.32	.517E+05	117.9	2.42	7.30
2.54	142.49	.600E+05	142.7	2.52	7.01
2.71	142.66	.689E+05	170.3	2.62	6.74
2.88	142.83	.785E+05	198.2	2.68	6.60
3.05	143.00	.892E+05	225.9	2.68	6.58
3.22	143.17	.101E+06	250.7	2.63	6.73

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		<---- hydrograph ---->			<-pipe / channel->	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (50260)	588.64	45.18	10.33	113.19	1.68	2.02
OUTFLOW: ID= 1 (60260)	588.64	44.41	10.50	113.19	1.66	2.01

CALIB	
STANDHYD (40270)	Area (ha)= 9.83
ID= 1 DT= 5.0 min	Total Imp(%)= 31.77 Dir. Conn.(%)= 22.01

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.12	6.71
Dep. Storage	(mm)=	2.00	8.03
Average Slope	(%)=	1.10	1.10
Length	(m)=	256.01	73.00
Mannings n	=	0.015	0.330

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

				TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	59.35	
over	(min)	5.00	25.00	
Storage Coeff.	(min)=	6.14 (ii)	23.77 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	25.00	
Unit Hyd. peak	(cms)=	0.19	0.05	
PEAK FLOW	(cms)=	0.32	1.00	1.306 (iii)
TIME TO PEAK	(hrs)=	10.17	10.33	10.17
RUNOFF VOLUME	(mm)=	210.34	185.46	190.94
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.87	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 91.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50270)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40270):	9.83	1.306	10.17	190.94
+ ID2= 2 (60260):	588.64	44.406	10.50	113.19
ID = 3 (50270):	598.47	45.607	10.50	114.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (40280)	Area (ha)= 31.30
ID= 1 DT= 5.0 min	Total Imp(%)= 64.40 Dir. Conn.(%)= 51.66

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	20.16	11.14
Dep. Storage	(mm)=	2.00	7.27
Average Slope	(%)=	1.10	1.10
Length	(m)=	456.83	53.00
Mannings n	=	0.015	0.310

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
                                                                                
     Max.Eff.Inten.(mm/hr)=      52.83        70.22
                   over (min)       10.00        25.00
     Storage Coeff.  (min)=       8.69 (ii)   21.79 (ii)
     Unit Hyd. Tpeak (min)=      10.00        25.00
     Unit Hyd. peak  (cms)=       0.12         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.37         2.00          4.346 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       184.28        197.74
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.87          0.93

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  88.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50280)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40280):    31.30   4.346    10.17   197.74
     + ID2= 2 ( 50270):   598.47  45.607    10.50   114.47
       ================================================
       ID = 3 ( 50280):   629.77  49.322    10.50   118.61

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60280)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         139.35        0.0450
                  3.00         139.19        0.0450
                  6.00         138.46        0.0450
                 27.00         137.71        0.0450
                 30.00         137.44        0.0350      Main Channel
                 33.00         137.26        0.0350      Main Channel
                 36.00         137.51        0.0350      Main Channel
                 39.00         137.64    0.0350 /0.0450  Main Channel
                 42.00         137.71        0.0450
                 57.00         139.35        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  137.35    .361E+02       0.0          0.30       17.09
        0.18  137.44    .145E+03       0.2          0.48       10.76
        0.30  137.55    .369E+03       0.8          0.68        7.57
        0.41  137.67    .717E+03       1.9          0.82        6.28
        0.52  137.78    .124E+04       3.9          0.97        5.27
        0.63  137.89    .192E+04       6.8          1.10        4.67
        0.74  138.00    .273E+04      10.7          1.20        4.25
        0.86  138.11    .369E+04      15.7          1.30        3.93
        0.97  138.23    .480E+04      21.8          1.39        3.67
        1.08  138.34    .605E+04      29.1          1.48        3.46
        1.19  138.45    .745E+04      37.8          1.56        3.28
        1.31  138.56    .895E+04      48.6          1.67        3.07
        1.42  138.68    .105E+05      60.8          1.78        2.88
        1.53  138.79    .121E+05      74.4          1.89        2.71
        1.64  138.90    .138E+05      89.3          1.99        2.57
        1.76  139.01    .155E+05     105.5          2.10        2.44
        1.87  139.13    .172E+05     123.0          2.19        2.33
        1.98  139.24    .190E+05     140.8          2.27        2.25
        2.09  139.35    .209E+05     159.0          2.33        2.20

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50280)  629.77    49.32   10.50 118.61      1.31      1.67
   OUTFLOW: ID= 1 ( 60280)  629.77    49.30   10.50 118.61      1.31      1.67


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--------------------
| CALIB            |
| STANDHYD ( 40300)|   Area     (ha)=  11.53
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.26   Dir. Conn.(%)=  44.96
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.71         4.81
     Dep. Storage     (mm)=       2.00         7.99
     Average Slope     (%)=       1.60         1.60
     Length            (m)=     277.19        63.00
     Mannings n           =      0.015        0.340

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        68.10
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       5.75 (ii)   19.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.20         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.76         0.86          1.614 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       182.98        195.28
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.86          0.92

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  88.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50300)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40300):    11.53   1.614    10.17   195.28
     + ID2= 2 ( 60280):   629.77  49.296    10.50   118.61
       ================================================
       ID = 3 ( 50300):   641.30  50.629    10.50   119.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60300)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         137.26        0.0450
                  4.00         136.94        0.0450
                  8.00         136.82        0.0450
                 12.00         136.69        0.0450
                 16.00         136.55        0.0450
                 36.00         135.52        0.0350      Main Channel
                 64.00         136.21        0.0450
                 75.00         136.49        0.0450
                 84.00         137.21        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.09  135.61    .491E+02       0.1          0.26       12.99
        0.18  135.70    .196E+03       0.4          0.42        8.18
        0.27  135.79    .442E+03       1.2          0.55        6.24
        0.36  135.88    .785E+03       2.5          0.66        5.15
        0.45  135.97    .123E+04       4.6          0.77        4.44
        0.53  136.06    .177E+04       7.5          0.87        3.93
        0.62  136.15    .240E+04      11.3          0.96        3.55
        0.71  136.24    .314E+04      16.4          1.07        3.19
        0.80  136.32    .397E+04      23.3          1.20        2.84
        0.89  136.41    .490E+04      31.4          1.32        2.60
        0.98  136.50    .592E+04      40.8          1.42        2.41
        1.07  136.59    .701E+04      51.5          1.51        2.27
        1.16  136.68    .816E+04      63.4          1.59        2.14
        1.25  136.77    .938E+04      76.6          1.67        2.04
        1.34  136.86    .107E+05      91.2          1.75        1.95
        1.42  136.95    .120E+05     107.3          1.83        1.87
        1.51  137.04    .135E+05     125.8          1.91        1.78
        1.60  137.13    .149E+05     145.6          2.00        1.71
        1.69  137.22    .164E+05     166.8          2.08        1.64

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                 (ha)    (cms)   (hrs)   (mm)      (m)      (m/s)
   INFLOW : ID= 2 ( 50300)  641.30    50.63   10.50 119.98      1.06      1.50
   OUTFLOW: ID= 1 ( 60300)  641.30    50.59   10.50 119.98      1.06      1.50


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--------------------
| CALIB            |
| STANDHYD ( 40290)|   Area     (ha)=   9.17
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.26   Dir. Conn.(%)=  23.52
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.77         6.39
     Dep. Storage     (mm)=       2.00         8.38
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     247.21        43.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.69
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.36 (ii)   14.19 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.23         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.32         0.99          1.302 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       181.84        188.54
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.86          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50340)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40290):     9.17   1.302    10.17   188.54
     + ID2= 2 ( 60300):   641.30  50.585    10.50   119.98
       ================================================
       ID = 3 ( 50340):   650.46  51.639    10.50   120.95

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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03367> ------------------------------------------------------------------------------
03368>
03369> --------------------
03370> | ADD HYD  ( 50350)|
03371> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03372> --------------------          (ha)    (cms)    (hrs)     (mm)
03373>         ID1= 1 ( 50110):   924.28  51.590    11.08    80.96
03374>       + ID2= 2 ( 50340):   650.46  51.639    10.50   120.95
03375>         ==================================================
03376>         ID = 3 ( 50350):  1574.75 101.036    10.92    97.48
03377>
03378>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03379> ------------------------------------------------------------------------------
03380> --------------------
03381> | ROUTE CHN( 60350)|
03382> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
03383> --------------------
03384>                 <------ DATA FOR SECTION (   1.1) ------>
03385>                 Distance      Elevation       Manning
03386>                    0.00         134.05        0.0450
03387>                   24.00         133.67        0.0450
03388>                   30.00         131.85        0.0450
03389>                   36.00         131.42        0.0450
03390>                   42.00         130.48        0.0450
03391>                   48.00         130.42        0.0350      Main Channel
03392>                   54.00         130.42        0.0350      Main Channel
03393>                   60.00         130.62        0.0450
03394>                   66.00         130.77        0.0450
03395>                   72.00         131.03        0.0450
03396>                   78.00         131.43        0.0450
03397>                   84.00         131.38        0.0450
03398>                   90.00         131.33        0.0450
03399>                   96.00         131.98        0.0450
03400>                  102.00         133.31        0.0450
03401>                  120.00         133.95        0.0450
03402>
03403>       <---------------------- TRAVEL TIME TABLE ----------------------->
03404>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
03405>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
03406>         0.00   130.42    .133E+02       0.0         0.03     768.63
03407>         0.19   130.61    .383E+04       1.6         0.61      40.07
03408>         0.37   130.79    .994E+04       6.6         0.97      25.18
03409>         0.56   130.98    .179E+05      15.1         1.23      19.81
03410>         0.75   131.16    .272E+05      27.2         1.46      16.72
03411>         0.93   131.35    .377E+05      42.2         1.64      14.88
03412>         1.12   131.54    .521E+05      60.9         1.71      14.26
03413>         1.30   131.72    .683E+05      87.2         1.86      13.07
03414>         1.49   131.91    .857E+05     119.1         2.03      11.99
03415>         1.68   132.09    .104E+06     157.8         2.22      10.96
03416>         1.86   132.28    .122E+06     201.6         2.41      10.11
03417>         2.05   132.47    .141E+06     250.1         2.59       9.41
03418>         2.23   132.65    .160E+06     303.1         2.76       8.82
03419>         2.42   132.84    .180E+06     360.6         2.93       8.32
03420>         2.61   133.02    .200E+06     422.5         3.08       7.90
03421>         2.79   133.21    .221E+06     488.7         3.24       7.53
03422>         2.98   133.40    .242E+06     552.2         3.34       7.29
03423>         3.16   133.58    .264E+06     613.6         3.40       7.17
03424>         3.35   133.77    .288E+06     658.8         3.34       7.30
03425>
03426>                                    <---- hydrograph ---->   <-pipe / channel->
03427>                               AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
03428>                               (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
03429>    INFLOW : ID= 2 ( 50350) 1574.75   101.04   10.92  97.48      1.39      1.93
03430>    OUTFLOW: ID= 1 ( 60350) 1574.75   100.29   11.17  97.47      1.38      1.93
03431>
03432>
03433>
03434> ------------------------------------------------------------------------------
03435> --------------------
03436> | CALIB            |
03437> | NASHYD   (******)|   Area     (ha)=   1.01   Curve Number    (CN)= 93.0
03438> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
03439> --------------------   U.H. Tp(hrs)=   0.22
03440>
03441>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
03442>
03443>
03444>                                ---- TRANSFORMED HYETOGRAPH ----
03445>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
03446>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
03447>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
03448>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
03449>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
03450>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
03451>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
03452>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
03453>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
03454>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
03455>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
03456>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
03457>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
03458>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
03459>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
03460>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
03461>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
03462>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
03463>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
03464>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
03465>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
03466>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
03467>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
03468>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
03469>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
03470>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
03471>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
03472>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
03473>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
03474>                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
03475>                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
03476>                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
03477>                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
03478>                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
03479>                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
03480>                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
03481>                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
03482>                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
03483>                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
03484>
03485>      Unit Hyd Qpeak  (cms)=   0.175
03486>
03487>      PEAK FLOW       (cms)=   0.145 (i)
03488>      TIME TO PEAK    (hrs)=  10.167
03489>      RUNOFF VOLUME    (mm)= 190.102
03490>      TOTAL RAINFALL   (mm)= 212.340
03491>      RUNOFF COEFFICIENT   =   0.895
03492>
03493>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03494>
03495> ------------------------------------------------------------------------------
03496> --------------------
03497> | CALIB            |
03498> | NASHYD   (******)|   Area     (ha)=   0.29   Curve Number    (CN)= 93.0
03499> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
03500> --------------------   U.H. Tp(hrs)=   0.17
03501>
03502>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
03503>
03504>
03505>                                ---- TRANSFORMED HYETOGRAPH ----
03506>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
03507>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
03508>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
03509>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
03510>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
03511>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
03512>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
03513>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
03514>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
03515>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
03516>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
03517>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
03518>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
03519>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
03520>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
03521>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
03522>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
03523>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
03524>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
03525>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
03526>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
03527>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
03528>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
03529>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
03530>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
03531>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
03532>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
03533>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
03534>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
03535>                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
03536>                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
03537>                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
03538>                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
03539>                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
03540>                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
03541>                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
03542>                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
03543>                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
03544>                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
03545>
03546>      Unit Hyd Qpeak  (cms)=   0.065
03547>
03548>      PEAK FLOW       (cms)=   0.042 (i)
03549>      TIME TO PEAK    (hrs)=  10.167
03550>      RUNOFF VOLUME    (mm)= 189.671
03551>      TOTAL RAINFALL   (mm)= 212.340
03552>      RUNOFF COEFFICIENT   =   0.893
03553>
03554>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03555>
03556> ------------------------------------------------------------------------------
03557> --------------------
03558> | CALIB            |
03559> | STANDHYD (******)|   Area     (ha)=   3.63
03560> |ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
03561> --------------------
03562>                                    IMPERVIOUS    PERVIOUS (i)
03563>      Surface Area     (ha)=       2.98          0.65
03564>      Dep. Storage     (mm)=       2.00          4.13
03565>      Average Slope     (%)=       1.00          2.00
03566>      Length            (m)=      30.00         30.00
03567>      Mannings n             =      0.013         0.025
03568>
03569>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
03570>
03571>
03572>                                ---- TRANSFORMED HYETOGRAPH ----
03573>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
03574>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
03575>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
03576>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
03577>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
03578>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
03579>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
03580>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
03581>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
03582>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
03583>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
03584>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
03585>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
03586>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
03587>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
03588>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
03589>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
03590>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
03591>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
03592>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
03593>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
03594>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
03595>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
03596>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
03597>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
03598>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
03599>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
03600>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
03601>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
03602>                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
03603>                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
03604>                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
03605>                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
03606>                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
03607>                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
03608>                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
03609>                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
03610>                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
03611>                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
03612>
03613>      Max.Eff.Inten.(mm/hr)=      52.83       172.94
03614>                over (min)          5.00         5.00
03615>      Storage Coeff.  (min)=       1.60 (ii)    2.99 (ii)
03616>      Unit Hyd. Tpeak (min)=       5.00         5.00
03617>      Unit Hyd. peak  (cms)=       0.32         0.28
03618>                                                          *TOTALS*
03619>      PEAK FLOW       (cms)=       0.22         0.31        0.532 (iii)
03620>      TIME TO PEAK    (hrs)=       9.67        10.17       10.17
03621>      RUNOFF VOLUME    (mm)=     210.34       205.40      207.43
03622>      TOTAL RAINFALL   (mm)=     212.34       212.34      212.34
03623>      RUNOFF COEFFICIENT   =       0.99         0.97        0.98
03624>
03625> ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
03626>
03627>        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
03628>              CN*  =  93.0    Ia = Dep. Storage  (Above)
03629>       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
03630>              THAN THE STORAGE COEFFICIENT.
03631>      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
03632>
03633> ------------------------------------------------------------------------------
03634> --------------------
03635> | DIVERTHYD(******)|
03636> | IN= 1   # OUT= 5 |
03637> --------------------
03638>      Outflow / Inflow  Relationships
03639>
03640>       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
03641>        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
03642>         0.00     0.00     0.00     0.00     0.00     0.00
03643>         0.37     0.00     0.00     0.00     0.00     0.37
03644>         0.37     1.00     0.00     0.00     0.00     1.37
03645>         0.37   100.00     0.00     0.00     0.00   100.37
03646>
03647>                                AREA     QPEAK     TPEAK     R.V.
03648>                                (ha)     (cms)     (hrs)     (mm)
03649>      TOTAL HYD.(ID= 1):        3.63      0.53     10.17   207.43
03650>      ================================================================
03651>      ID= 2  (   2)    :        3.34      0.37     10.17   207.43
03652>      ID= 3  (   2)    :        0.29      0.16     10.17   207.43
03653>      ID= 4  (   2)    :        0.00      0.00      0.00     0.00
03654>      ID= 5  (   2)    :        0.00      0.00      0.00     0.00
03655>      ID= 6  (   2)    :        0.00      0.00      0.00     0.00
03656> ------------------------------------------------------------------------------
03657>
03658> --------------------
03659> | ADD HYD  (******)|
03660> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
03661> --------------------          (ha)    (cms)    (hrs)     (mm)
03662>         ID1= 1 (******):     0.29    0.042    10.17   189.67
03663>       + ID2= 2 (******):     3.34    0.373    10.17   207.43
03664>         ==================================================
03665>         ID = 3 (******):     3.63    0.415    10.17   206.01
03666>
03667>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
03668> ------------------------------------------------------------------------------
03669>
03670> --------------------
03671> | ADD HYD  (******)|
03672> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
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                    (ha)    (cms)    (hrs)     (mm)
      ID1= 1 (******):     1.01   0.145    10.17   190.10
    + ID2= 2 (******):     3.63   0.415    10.17   206.01
      ================================================
      ID = 3 (******):     4.64   0.560    10.17   202.55

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.16   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.26

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.317

     PEAK FLOW       (cms)=   0.309 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.222
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
      ID1= 1 (******):     2.16   0.309    10.17   190.22
    + ID2= 2 (******):     4.64   0.560    10.17   202.55
      ================================================
      ID = 3 (******):     6.80   0.869    10.17   198.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.03   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.164

     PEAK FLOW       (cms)=   0.148 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.174
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.22   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
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```
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.314

     PEAK FLOW       (cms)=   0.317 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.240
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.80   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.139

     PEAK FLOW       (cms)=   0.115 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.102
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| STANDHYD (******)|   Area    (ha)=   1.62
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  36.00
--------------------

                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.44
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
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                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83       124.92
                  over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.60 (ii)    3.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.26
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.15        0.237 (iii)
     TIME TO PEAK    (hrs)=       9.67        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       202.83        205.53
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.96          0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.15     0.00     0.00     0.00     0.00     0.15
        0.15     1.00     0.00     0.00     0.00     1.15
        0.15   100.00     0.00     0.00     0.00   100.15

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    1.62      0.24     10.17  205.53
     ================================================
     ID= 2  (   2)    :    1.45      0.15     10.17  205.53
     ID= 3  (   2)    :    0.17      0.08     10.17  205.53
     ID= 4  (   2)    :    0.00      0.00      0.00    0.00
     ID= 5  (   2)    :    0.00      0.00      0.00    0.00
     ID= 6  (   2)    :    0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.80    0.115    10.17   190.10
      + ID2= 2 (******):     1.45    0.154    10.17   205.53
        ================================================
        ID = 3 (******):     2.25    0.269    10.17   200.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.22    0.317    10.17   190.24
      + ID2= 2 (******):     2.25    0.269    10.17   200.04
        ================================================
        ID = 3 (******):     4.47    0.586    10.17   195.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     1.00     0.00     0.00     0.00     2.00
        2.00     2.00     0.00     0.00     0.00     4.00
       10.00    10.00     0.00     0.00     0.00    20.00

                           AREA     QPEAK     TPEAK    R.V.
                           (ha)     (cms)     (hrs)    (mm)
     TOTAL HYD.(ID= 1):    4.47      0.59     10.17  195.17
     ================================================
     ID= 2  (   2)    :    2.23      0.29     10.17  195.17
     ID= 3  (   2)    :    2.23      0.29     10.17  195.17
     ID= 4  (   2)    :    0.00      0.00      0.00    0.00
     ID= 5  (   2)    :    0.00      0.00      0.00    0.00
     ID= 6  (   2)    :    0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.03    0.148    10.17   190.17
      + ID2= 2 (******):     2.23    0.293    10.17   195.17
        ================================================
        ID = 3 (******):     3.26    0.441    10.17   193.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.61   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.129

     PEAK FLOW       (cms)=   0.088 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.806
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.894

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.61    0.088    10.17   189.81
      + ID2= 2 (******):     2.23    0.293    10.17   195.17
        ================================================
        ID = 3 (******):     2.84    0.381    10.17   194.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.54   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.103

     PEAK FLOW       (cms)=   0.078 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.989
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.26   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.071

     PEAK FLOW       (cms)=   0.037 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 188.924
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      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.890

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.26   0.037    10.17   188.92
      + ID2= 2 (******):     0.54   0.078    10.17   189.99
        ==========================================================
        ID = 3 (******):     0.80   0.115    10.17   189.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.80   0.115    10.17   189.64
      + ID2= 2 (******):     2.84   0.381    10.17   194.02
        ==========================================================
        ID = 1 (******):     3.64   0.496    10.17   193.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   1.92   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.319

     PEAK FLOW       (cms)=   0.276 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.142
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.71   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.20

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.136

     PEAK FLOW       (cms)=   0.102 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.990
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (******)|   Area    (ha)=   1.19
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.18         0.01
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.60 (ii)    1.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.32

                                                *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.00          0.175 (iii)
     TIME TO PEAK    (hrs)=       9.67        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       190.70         210.14
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.90           0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (******)|   Area    (ha)=   8.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.21         0.08
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      30.00        30.00
     Mannings n           =      0.013        0.025

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.60 (ii)    1.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.32

                                                *TOTALS*
     PEAK FLOW       (cms)=       1.20         0.01          1.216 (iii)
     TIME TO PEAK    (hrs)=       9.67        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       190.70         210.14
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.90           0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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```

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04591>
04592> --------------------
04593> | ADD HYD  (******)|
04594> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04595> --------------------         (ha)    (cms)    (hrs)     (mm)
04596>         ID1= 1 (******):     0.71   0.102    10.17   189.99
04597>       + ID2= 2 (******):     1.92   0.276    10.17   190.14
04598>         ================================================
04599>         ID = 3 (******):     2.63   0.379    10.17   190.10
04600>
04601>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04602> ------------------------------------------------------------------------------
04603>
04604> --------------------
04605> | ADD HYD  (******)|
04606> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
04607> --------------------         (ha)    (cms)    (hrs)     (mm)
04608>         ID1= 3 (******):     2.63   0.379    10.17   190.10
04609>       + ID2= 2 (******):     8.29   1.216    10.17   210.14
04610>         ================================================
04611>         ID = 1 (******):    10.92   1.595    10.17   205.32
04612>
04613>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04614> ------------------------------------------------------------------------------
04615>
04616> --------------------
04617> | ADD HYD  (******)|
04618> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04619> --------------------         (ha)    (cms)    (hrs)     (mm)
04620>         ID1= 1 (******):    10.92   1.595    10.17   205.32
04621>       + ID2= 2 (******):     1.19   0.175    10.17   210.14
04622>         ================================================
04623>         ID = 3 (******):    12.11   1.770    10.17   205.79
04624>
04625>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04626> ------------------------------------------------------------------------------
04627>
04628> --------------------
04629> | ADD HYD  (******)|
04630> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
04631> --------------------         (ha)    (cms)    (hrs)     (mm)
04632>         ID1= 3 (******):    12.11   1.770    10.17   205.79
04633>       + ID2= 2 (******):     3.26   0.441    10.17   193.60
04634>         ================================================
04635>         ID = 1 (******):    15.37   2.210    10.17   203.20
04636>
04637>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04638> ------------------------------------------------------------------------------
04639>
04640> --------------------
04641> | ADD HYD  (******)|
04642> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04643> --------------------         (ha)    (cms)    (hrs)     (mm)
04644>         ID1= 1 (******):    15.37   2.210    10.17   203.20
04645>       + ID2= 2 (******):     3.64   0.496    10.17   193.06
04646>         ================================================
04647>         ID = 3 (******):    19.02   2.707    10.17   201.26
04648>
04649>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04650> ------------------------------------------------------------------------------
04651>
04652> --------------------
04653> | ADD HYD  (******)|
04654> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
04655> --------------------         (ha)    (cms)    (hrs)     (mm)
04656>         ID1= 3 (******):    19.02   2.707    10.17   201.26
04657>       + ID2= 2 (******):     6.80   0.869    10.17   198.64
04658>         ================================================
04659>         ID = 1 (******):    25.82   3.576    10.17   200.57
04660>
04661>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04662> ------------------------------------------------------------------------------
04663> --------------------
04664> | RESERVOIR(******)|     OVERFLOW IS ON
04665> | IN= 2---> OUT= 1 |
04666> | DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
04667> --------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
04668>                            0.0000     0.0000   |    1.0509     1.2511
04669>                            0.0499     0.1231   |    1.2225     1.4841
04670>                            0.0887     0.3106   |    1.2743     1.5652
04671>                            0.1027     0.4143   |    1.3240     1.6479
04672>                            0.1415     0.5824   |    1.5681     1.7322
04673>                            0.4137     0.7655   |    1.9730     1.8182
04674>                            0.8423     1.0330   |    2.4824     1.9059
04675>
04676>                                AREA     QPEAK     TPEAK       R.V.
04677>                                (ha)     (cms)     (hrs)       (mm)
04678>    INFLOW : ID= 2 (******)     25.824     3.576     10.17     200.57
04679>    OUTFLOW: ID= 1 (******)     25.199     2.482     10.42     199.40
04680>    OVERFLOW:ID= 3 (  0003)      0.625     0.541     10.50     199.40
04681>
04682>                    TOTAL NUMBER OF SIMULATION OVERFLOW  =    10
04683>                    CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.83
04684>                    PERCENTAGE OF TIME OVERFLOWING   (%) =  1.23
04685>
04686>                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 69.42
04687>                    TIME SHIFT OF PEAK FLOW          (min)= 15.00
04688>                    MAXIMUM  STORAGE   USED       (ha.m.)=  1.9059
04689>
04690> ------------------------------------------------------------------------------
04691>
04692>   --------------------------
04693>   | Junction Command(30361002) |
04694>   --------------------------
04695>
04696>                             AREA     QPEAK   TPEAK     R.V.
04697>                             (ha)     (cms)    (hrs)     (mm)
04698>   INFLOW : ID= 3(30361001)    0.62     0.54   10.50   199.40
04699>   OUTFLOW: ID= 2(30361002)    0.62     0.54   10.50   199.40
04700>
04701>   ------------------------------------------------------------------------------
04702> --------------------
04703> | CALIB            |
04704> | NASHYD   (******)|   Area     (ha)=   0.70   Curve Number    (CN)= 85.0
04705> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
04706> --------------------   U.H. Tp(hrs)=   0.21
04707>
04708>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
04709>
04710>
04711>                                  ---- TRANSFORMED HYETOGRAPH ----
04712>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
04713>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
04714>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
04715>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
04716>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
04717>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
04718>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
04719>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
04720>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
04721>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
04722>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
04723>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
04724>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
04725>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
04726>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
04727>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
04728>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
04729>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
04730>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
04731>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
04732>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
04733>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
04734>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
04735>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
04736>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
04737>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
04738>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
04739>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
04740>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
04741>                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
04742>                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
04743>                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
04744>                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
04745>                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
04746>                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
04747>                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
04748>                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
04749>                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
04750>                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
04751>
04752>      Unit Hyd Qpeak  (cms)=   0.127
04753>
04754>      PEAK FLOW       (cms)=   0.096 (i)
04755>      TIME TO PEAK    (hrs)=  10.167
04756>      RUNOFF VOLUME    (mm)= 170.718
04757>      TOTAL RAINFALL   (mm)= 212.340
04758>      RUNOFF COEFFICIENT   =   0.804
04759>
04760>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
04761>
04762> ------------------------------------------------------------------------------
04763>
04764> --------------------
04765> | ADD HYD  ( 50360)|
04766> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04767> --------------------         (ha)    (cms)    (hrs)     (mm)
04768>         ID1= 1 (******):    25.20   2.482    10.42   199.40
04769>       + ID2= 2 (******):     0.62   0.541    10.50   199.40
04770>         ================================================
04771>         ID = 3 ( 50360):    25.82   2.897    10.50   199.40
04772>
04773>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04774> ------------------------------------------------------------------------------
04775>
04776> --------------------
04777> | ADD HYD  ( 50360)|
04778> |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
04779> --------------------         (ha)    (cms)    (hrs)     (mm)
04780>         ID1= 3 ( 50360):    25.82   2.897    10.50   199.40
04781>       + ID2= 2 (******):     0.70   0.096    10.17   170.72
04782>         ================================================
04783>         ID = 1 ( 50360):    26.52   2.975    10.50   198.65
04784>
04785>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04786> ------------------------------------------------------------------------------
04787>
04788> --------------------
04789> | ADD HYD  ( 50360)|
04790> |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
04791> --------------------         (ha)    (cms)    (hrs)     (mm)
04792>         ID1= 1 ( 50360):    26.52   2.975    10.50   198.65
04793>       + ID2= 2 ( 60350):  1574.75 100.289    11.17    97.47
04794>         ================================================
04795>         ID = 3 ( 50360):  1601.27 103.089    11.17    99.15
04796>
04797>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
04798> ------------------------------------------------------------------------------
04799> --------------------
04800> | ROUTE CHN( 60390)|
04801> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
04802> --------------------
04803>                <------ DATA FOR SECTION (   1.1) ------>
04804>                Distance      Elevation       Manning
04805>                    0.00         127.30        0.0450
04806>                    6.00         127.39        0.0450
04807>                   12.00         127.46        0.0450
04808>                   18.00         126.87        0.0450
04809>                   24.00         125.30        0.0450
04810>                   30.00         123.90        0.0450
04811>                   36.00         123.14        0.0450
04812>                   42.00         123.07        0.0450
04813>                   48.00         122.88        0.0450
04814>                   54.00         122.90        0.0450
04815>                   60.00         122.95        0.0450
04816>                   66.00         123.04        0.0450
04817>                   72.00         123.15        0.0350      Main Channel
04818>                   78.00         122.98        0.0450
04819>                   84.00         122.97        0.0450
04820>                   90.00         122.96        0.0450
04821>                   96.00         122.92        0.0450
04822>                  102.00         123.50        0.0450
04823>                  108.00         124.18        0.0450
04824>                  120.00         127.45        0.0450
04825>
04826>       <---------------------- TRAVEL TIME TABLE ---------------------->
04827>        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
04828>          (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
04829>         0.09   122.98    .246E+03        0.4         0.31      10.02
04830>         0.33   123.21    .251E+04       11.8         0.86       3.57
04831>         0.56   123.45    .538E+04       39.9         1.37       2.25
04832>         0.80   123.68    .842E+04       81.1         1.78       1.73
04833>         1.04   123.92    .116E+05      134.5         2.13       1.44
04834>         1.27   124.16    .150E+05      200.0         2.46       1.25
04835>         1.51   124.39    .185E+05      278.3         2.78       1.11
04836>         1.74   124.63    .220E+05      367.4         3.08       1.00
04837>         1.98   124.86    .257E+05      466.7         3.35       0.92
04838>         2.22   125.10    .294E+05      576.1         3.61       0.85
04839>         2.45   125.34    .332E+05      695.4         3.86       0.80
04840>         2.69   125.57    .371E+05      824.8         4.10       0.75
04841>         2.92   125.81    .410E+05      963.8         4.33       0.71
04842>         3.16   126.04    .451E+05     1112.3         4.55       0.68
04843>         3.39   126.28    .492E+05     1270.1         4.76       0.65
04844>         3.63   126.51    .534E+05     1437.3         4.97       0.62
04845>         3.87   126.75    .576E+05     1613.7         5.16       0.60
04846>         4.10   126.99    .620E+05     1791.1         5.33       0.58
04847>         4.34   127.22    .665E+05     1970.4         5.47       0.56
04848>
04849>                                    <---- hydrograph ---->   <-pipe / channel->
04850>                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
04851>                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
04852>    INFLOW : ID= 2 ( 50360) 1601.27   103.09    11.17  99.15       0.90       1.91
04853>    OUTFLOW: ID= 1 ( 60390) 1601.27   103.10    11.17  99.15       0.90       1.91
04854>
04855>
04856>
04857> ------------------------------------------------------------------------------
04858> --------------------
04859> | CALIB            |
04860> | NASHYD   ( 40390)|   Area     (ha)=  20.55   Curve Number    (CN)= 90.0
04861> |ID= 1 DT= 5.0 min |   Ia       (mm)=   8.47   # of Linear Res.(N)= 3.00
04862> --------------------   U.H. Tp(hrs)=   0.20
04863>
04864>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
04865>
04866>
04867>                                  ---- TRANSFORMED HYETOGRAPH ----
04868>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
04869>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
04870>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
04871>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
04872>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
04873>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
04874>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
04875>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
04876>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
04877>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
04878>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
04879>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
04880>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
04881>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
04882>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
04883>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
04884>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
04885>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
04886>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
04887>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
04888>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
04889>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
04890>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
04891>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
04892>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
04893>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
04894>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
04895>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
04896>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
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                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   3.925

     PEAK FLOW       (cms)=   2.920 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 178.739
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.842

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50390)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40390):    20.55   2.920    10.17   178.74
      + ID2= 2 ( 60390):  1601.27 103.105    11.17    99.15
        ==========================================================
        ID = 3 ( 50390):  1621.82 105.224    11.17   100.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40370)|   Area    (ha)=  17.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.98   Dir. Conn.(%)=  52.33
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      11.83         6.10
     Dep. Storage     (mm)=       2.00         6.08
     Average Slope     (%)=       1.50         1.50
     Length            (m)=     345.74        42.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
             0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
             0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
             0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
             0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
             0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
             0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
             0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
             0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
             0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
             0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
             1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
             1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
             1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
             1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
             1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
             1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
             1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
             1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
             1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
             1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
             1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
             1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
             2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
             2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
             2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
             2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
             2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
             2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
             2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
             2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
             2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
             2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
             2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
             2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
             3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
             3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        73.21
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       6.70 (ii)   16.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.18         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.38         1.19          2.571 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       191.50         201.36
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.90           0.95

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  91.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ROUTE CHN( 60370)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         127.70        0.0450
                 18.00         126.87        0.0450
                 24.00         125.30        0.0450
                 30.00         123.90        0.0450
                 36.00         123.14        0.0450
                 42.00         123.07        0.0450
                 48.00         122.88        0.0450
                 54.00         122.90        0.0450
                 60.00         122.95        0.0450
                 66.00         123.04    0.0450 /0.0350  Main Channel
                 72.00         122.86        0.0350      Main Channel
                 78.00         122.98        0.0450
                 84.00         122.97        0.0450
                 90.00         122.96        0.0450
                 96.00         122.92        0.0450
                102.00         123.50        0.0450
                108.00         124.18        0.0450
                120.00         127.45        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)       (min)
        0.12  122.98    .275E+03        0.7        0.35        6.78
        0.36  123.21    .218E+04       14.7        0.95        2.47
        0.59  123.45    .437E+04       44.6        1.44        1.63
        0.83  123.68    .670E+04       87.2        1.84        1.28
        1.06  123.92    .916E+04      141.6        2.19        1.08
        1.30  124.16    .117E+05      208.1        2.51        0.94
        1.54  124.39    .144E+05      287.0        2.82        0.84
        1.77  124.63    .171E+05      376.7        3.11        0.76
        2.01  124.86    .199E+05      476.5        3.38        0.70
        2.24  125.10    .228E+05      586.1        3.64        0.65
        2.48  125.33    .257E+05      705.6        3.88        0.61
        2.71  125.57    .287E+05      835.1        4.12        0.57
        2.95  125.80    .317E+05      974.0        4.35        0.54
        3.19  126.04    .348E+05     1122.3        4.56        0.52
        3.42  126.28    .379E+05     1279.8        4.77        0.49
        3.66  126.51    .411E+05     1446.6        4.97        0.47
        3.89  126.75    .444E+05     1622.6        5.17        0.46
        4.13  126.98    .477E+05     1786.6        5.29        0.45
        4.36  127.22    .513E+05     1942.9        5.36        0.44

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 40370)   17.93     2.57   10.17 201.36      0.15      0.38
   OUTFLOW: ID= 1 ( 60370)   17.93     2.55   10.17 201.36      0.15      0.38


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| ADD HYD  ( 50400)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50390):  1621.82 105.224    11.17   100.16
      + ID2= 2 ( 60370):    17.93   2.548    10.17   201.36
        ==========================================================
        ID = 3 ( 50400):  1639.75 107.124    11.17   101.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60400)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         125.01        0.0450
                 20.00         123.70        0.0450
                 25.00         123.04        0.0450
                 30.00         120.84        0.0450
                 35.00         119.81    0.0450 /0.0350  Main Channel
                 40.00         119.74        0.0350      Main Channel
                 65.00         120.12        0.0450
                 90.00         120.58        0.0450
                100.00         125.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)      (cms)       (m/s)       (min)
        0.07  119.81    .209E+03        0.1        0.27       34.81
        0.35  120.09    .326E+04        4.7        0.83       11.50
        0.62  120.36    .916E+04       21.3        1.34        7.16
        0.90  120.63    .176E+05       51.5        1.68        5.69
        1.17  120.91    .270E+05       96.6        2.05        4.67
        1.44  121.18    .367E+05      153.8        2.41        3.98
        1.72  121.46    .466E+05      222.1        2.74        3.50
        1.99  121.73    .567E+05      300.7        3.05        3.14
        2.26  122.00    .669E+05      389.1        3.34        2.87
        2.54  122.28    .774E+05      487.1        3.62        2.65
        2.81  122.55    .880E+05      594.2        3.88        2.47
        3.09  122.82    .988E+05      710.4        4.13        2.32
        3.36  123.10    .110E+06      834.4        4.36        2.20
        3.63  123.37    .121E+06      964.4        4.57        2.10
        3.91  123.65    .133E+06     1104.4        4.76        2.01
        4.18  123.92    .145E+06     1250.0        4.93        1.94
        4.45  124.19    .159E+06     1406.7        5.09        1.88
        4.73  124.47    .172E+06     1575.5        5.25        1.82
        5.00  124.74    .187E+06     1756.1        5.39        1.77

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50400) 1639.75   107.12   11.17 101.26      1.22      2.11
   OUTFLOW: ID= 1 ( 60400) 1639.75   107.03   11.17 101.26      1.22      2.10


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--------------------
| CALIB            |
| STANDHYD ( 40410)|   Area    (ha)=   7.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  28.60   Dir. Conn.(%)=  25.07
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26         5.65
     Dep. Storage     (mm)=       2.00         9.48
     Average Slope     (%)=       1.10         1.10
     Length            (m)=     229.75       574.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
             0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
             0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
             0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
             0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
             0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
             0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
             0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
             0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
             0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
             0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
             1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
             1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
             1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
             1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
             1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
             1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
             1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
             1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
             1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
             1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
             1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
             1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
             2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
             2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
             2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
             2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
             2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
             2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
             2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
             2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
             2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
             2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
             2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
             2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
             3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
             3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.35
                   over (min)        5.00        75.00
     Storage Coeff.  (min)=       5.75 (ii)   71.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00        75.00
     Unit Hyd. peak  (cms)=       0.20         0.02
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.29         0.58          0.781 (iii)
     TIME TO PEAK    (hrs)=      10.17        11.33          11.17
     RUNOFF VOLUME    (mm)=     210.34       177.23         185.53
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.83           0.87

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50410)|
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```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40410):     7.92   0.781    11.17   185.53
     + ID2= 2 ( 60400):  1639.75 107.026    11.17   101.26
       ================================================
       ID = 3 ( 50410):  1647.67 107.807    11.17   101.67

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.28   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
    Unit Hyd Qpeak  (cms)=   0.196

    PEAK FLOW       (cms)=   0.183 (i)
    TIME TO PEAK    (hrs)=  10.167
    RUNOFF VOLUME    (mm)= 190.200
    TOTAL RAINFALL   (mm)= 212.340
    RUNOFF COEFFICIENT   =   0.896

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   4.12   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.33

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
    Unit Hyd Qpeak  (cms)=   0.477

    PEAK FLOW       (cms)=   0.574 (i)
    TIME TO PEAK    (hrs)=  10.250
    RUNOFF VOLUME    (mm)= 190.301
    TOTAL RAINFALL   (mm)= 212.340
    RUNOFF COEFFICIENT   =   0.896

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   1.24   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.24

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

```
    Unit Hyd Qpeak  (cms)=   0.197

    PEAK FLOW       (cms)=   0.178 (i)
    TIME TO PEAK    (hrs)=  10.167
    RUNOFF VOLUME    (mm)= 190.174
    TOTAL RAINFALL   (mm)= 212.340
    RUNOFF COEFFICIENT   =   0.896

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     4.12   0.574    10.25   190.30
     + ID2= 2 (******):     1.24   0.178    10.17   190.17
       ================================================
       ID = 3 (******):     5.36   0.751    10.17   190.27

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (******):     5.36   0.751    10.17   190.27
     + ID2= 2 (******):     1.28   0.183    10.17   190.20
       ================================================
       ID = 1 (******):     6.64   0.934    10.17   190.26

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| CALIB            |
| STANDHYD ( 40420)|   Area     (ha)=  21.79
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.00   Dir. Conn.(%)=  25.00
-------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.75	15.03
Dep. Storage	(mm)=	2.00	7.70
Average Slope	(%)=	1.90	1.90
Length	(m)=	671.17	232.57
Mannings n	=	0.015	0.240

```
        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

				TOTALS
Max.Eff.Inten.	(mm/hr)=	52.83	56.28	
over	(min)	10.00	35.00	
Storage Coeff.	(min)=	9.29 (ii)	34.60 (ii)	
Unit Hyd. Tpeak	(min)=	10.00	35.00	
Unit Hyd. peak	(cms)=	0.12	0.03	
PEAK FLOW	(cms)=	0.80	1.96	2.631 (iii)
TIME TO PEAK	(hrs)=	10.17	10.50	10.25
RUNOFF VOLUME	(mm)=	210.34	184.48	190.95
TOTAL RAINFALL	(mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT	=	0.99	0.87	0.90

```
      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  91.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40420):    21.79   2.631    10.25   190.95
     + ID2= 2 (******):     6.64   0.934    10.17   190.26
       ================================================
       ID = 3 (******):    28.43   3.560    10.25   190.79

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ADD HYD  ( 50420)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)     (cms)    (hrs)      (mm)
        ID1= 1 ( 50410):  1647.67 107.807    11.17   101.67
      + ID2= 2 (******):    28.43   3.560    10.25   190.79
        ================================================
        ID = 3 ( 50420):  1676.10 110.875    11.17   103.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
-------------------
| ROUTE CHN( 60420)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        121.79        0.0450
                   12.00        116.08        0.0450
                   40.00        115.59    0.0450 /0.0350  Main Channel
                   44.00        114.89        0.0350      Main Channel
                   48.00        114.52        0.0350      Main Channel
                   52.00        115.72    0.0350 /0.0450  Main Channel
                   56.00        115.93        0.0450
                   60.00        117.24        0.0450
                   64.00        119.04        0.0450
                   68.00        120.69        0.0450
                   72.00        121.01        0.0450
                   74.00        121.49        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.36   114.88    .645E+03        0.7         0.83      14.38
       0.71   115.23    .236E+04        4.6         1.41       8.47
       1.07   115.59    .489E+04       12.6         1.84       6.48
       1.44   115.96    .112E+05       30.9         1.97       6.04
       1.80   116.33    .227E+05       69.1         2.17       5.49
       2.17   116.70    .351E+05      125.6         2.56       4.65
       2.54   117.06    .479E+05      197.5         2.95       4.04
       2.91   117.43    .612E+05      283.9         3.32       3.59
       3.28   117.80    .749E+05      384.1         3.66       3.25
       3.65   118.17    .891E+05      497.4         3.99       2.99
       4.02   118.54    .104E+06      623.5         4.30       2.77
       4.39   118.91    .119E+06      762.2         4.59       2.60
       4.76   119.28    .134E+06      913.1         4.87       2.45
       5.13   119.65    .150E+06     1076.2         5.13       2.32
       5.49   120.02    .166E+06     1251.7         5.38       2.21
       5.86   120.39    .183E+06     1439.5         5.62       2.12
       6.23   120.75    .200E+06     1634.3         5.84       2.04
       6.60   121.12    .219E+06     1831.3         5.99       1.99
       6.97   121.49    .238E+06     2058.5         6.20       1.92

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50420) 1676.10   110.88   11.17 103.18       2.08       2.45
   OUTFLOW: ID= 1 ( 60420) 1676.10   110.67   11.25 103.18       2.08       2.44


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40430)|   Area    (ha)=  32.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  64.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      21.41         11.03
     Dep. Storage     (mm)=       2.00          7.80
     Average Slope     (%)=       3.50          3.50
     Length            (m)=     465.00        102.00
     Mannings n           =      0.015         0.320

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.59
                  over (min)       5.00        25.00
     Storage Coeff.  (min)=       6.20 (ii)   21.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.19         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       3.05         1.54          4.568 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       181.39        199.92
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.85          0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
-------------------
| ADD HYD  ( 50430)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)     (cms)    (hrs)      (mm)
        ID1= 1 ( 40430):    32.43   4.568    10.17   199.92
      + ID2= 2 ( 60420):  1676.10 110.670    11.25   103.18
        ================================================
        ID = 3 ( 50430):  1708.53 114.052    11.17   105.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
-------------------
| ROUTE CHN( 60430)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        116.29        0.0450
                   20.00        114.05        0.0450
                   25.00        110.83        0.0450
                   30.00        109.36        0.0450
                   35.00        108.23    0.0450 /0.0350  Main Channel
                   40.00        107.52        0.0350      Main Channel
                   45.00        108.00    0.0350 /0.0450  Main Channel
                   50.00        107.84        0.0450
                   55.00        108.21        0.0450
                   60.00        108.95        0.0450
                   65.00        109.35        0.0450
                   70.00        109.41        0.0450
                   75.00        109.48        0.0450
                   80.00        109.77        0.0450
                   85.00        112.20        0.0450
                   90.00        115.48        0.0450
                  100.00        116.29        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.24   107.76    .285E+03        0.4         0.74      12.74
       0.48   108.00    .146E+04        2.6         1.01       9.32
       0.97   108.49    .695E+04       23.3         1.90       4.97
       1.46   108.97    .141E+05       64.5         2.60       3.63
       1.94   109.46    .233E+05      116.9         2.84       3.33
       2.43   109.95    .371E+05      214.6         3.28       2.88
       2.92   110.44    .519E+05      350.2         3.83       2.47
       3.41   110.92    .675E+05      515.9         4.34       2.18
       3.89   111.41    .836E+05      711.3         4.82       1.96
       4.38   111.90    .100E+06      933.4         5.28       1.79
       4.87   112.39    .117E+06     1182.4         5.71       1.65
       5.35   112.87    .135E+06     1458.0         6.13       1.54
       5.84   113.36    .153E+06     1758.3         6.52       1.45
       6.33   113.85    .171E+06     2082.9         6.90       1.37
       6.82   114.34    .190E+06     2410.6         7.19       1.31
       7.30   114.82    .210E+06     2758.9         7.43       1.27
       7.79   115.31    .232E+06     3143.1         7.68       1.23
       8.28   115.80    .255E+06     3473.3         7.71       1.23
       8.77   116.29    .282E+06     3812.4         7.67       1.23

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)    (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50430) 1708.53   114.05   11.17 105.02       1.92       2.83
   OUTFLOW: ID= 1 ( 60430) 1708.53   113.74   11.17 105.02       1.91       2.82


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40440)|   Area    (ha)=  57.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  65.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      37.70         19.42
     Dep. Storage     (mm)=       2.00          6.60
     Average Slope     (%)=       2.50          2.50
     Length            (m)=     617.06         45.00
     Mannings n           =      0.015         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.24
                  over (min)      10.00        20.00
     Storage Coeff.  (min)=       8.13 (ii)   18.17 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.13         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       5.44         2.67          8.108 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       174.66        197.85
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.82          0.93

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  87.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
-------------------
| ADD HYD  ( 50440)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)     (cms)    (hrs)      (mm)
        ID1= 1 ( 40440):    57.11   8.108    10.17   197.85
      + ID2= 2 ( 60430):  1708.53 113.745    11.17   105.02
        ================================================
        ID = 3 ( 50440):  1765.64 119.732    11.17   108.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
-------------------
| ROUTE CHN( 60440)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
-------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        104.01        0.0450
                   10.00        103.90        0.0450
                   20.00        103.74        0.0450
                   30.00        103.66        0.0450
                   40.00        103.60        0.0450
                   50.00        102.52        0.0450
                   60.00        101.16        0.0450
```

```
                  70.00        100.60        0.0450
                  80.00        100.17        0.0450
                  90.00         99.85        0.0450
                 100.00         97.89        0.0350      Main Channel
                 110.00         97.62        0.0350      Main Channel
                 120.00         99.12        0.0450
                 130.00         99.16        0.0450
                 140.00         99.36        0.0450
                 150.00         99.66        0.0450
                 160.00         99.68        0.0450
                 180.00         99.76        0.0450
                 190.00        104.10        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.27    97.89    .102E+04        1.2         0.77      13.74
        0.60    98.21    .381E+04        9.4         1.56       6.74
        0.92    98.53    .738E+04       24.3         2.08       5.05
        1.24    98.86    .117E+05       46.2         2.50       4.22
        1.56    99.18    .171E+05       76.6         2.84       3.71
        1.89    99.50    .264E+05      124.5         2.98       3.53
        2.21    99.82    .403E+05      189.1         2.96       3.56
        2.53   100.15    .597E+05      286.1         3.03       3.48
        2.85   100.47    .809E+05      417.7         3.26       3.23
        3.17   100.79    .104E+06      580.2         3.53       2.98
        3.50   101.11    .128E+06      771.7         3.81       2.77
        3.82   101.44    .153E+06      996.3         4.10       2.57
        4.14   101.76    .179E+06     1248.4         4.40       2.40
        4.46   102.08    .206E+06     1526.4         4.68       2.25
        4.79   102.40    .233E+06     1829.8         4.96       2.13
        5.11   102.73    .261E+06     2156.4         5.22       2.02
        5.43   103.05    .290E+06     2507.0         5.47       1.93
        5.75   103.37    .319E+06     2882.7         5.71       1.85
        6.08   103.69    .350E+06     3194.7         5.77       1.83

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50440) 1765.64   119.73   11.17 108.02      1.85      2.97
   OUTFLOW: ID= 1 ( 60440) 1765.64   119.39   11.25 108.02      1.84      2.97
```

```
| CALIB            |
| STANDHYD ( 40450)|   Area    (ha)=  30.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  44.00   Dir. Conn.(%)=  41.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.37         17.02
     Dep. Storage     (mm)=       2.00          6.90
     Average Slope     (%)=       0.80          0.80
     Length            (m)=     450.16        150.00
     Mannings n           =      0.015         0.300

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83         53.98
                   over (min)       10.00         40.00
     Storage Coeff.  (min)=       9.47 (ii)     38.79 (ii)
     Unit Hyd. Tpeak (min)=      10.00         40.00
     Unit Hyd. peak  (cms)=       0.12          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.83          2.06          3.649 (iii)
     TIME TO PEAK    (hrs)=      10.17         10.67          10.17
     RUNOFF VOLUME    (mm)=     210.34        179.76         192.30
     TOTAL RAINFALL   (mm)=     212.34        212.34         212.34
     RUNOFF COEFFICIENT   =       0.99          0.85           0.91

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50450)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40450):    30.40    3.649    10.17   192.30
     + ID2= 2 ( 60440):  1765.64  119.393    11.25   108.02
       ================================================
       ID = 3 ( 50450):  1796.04  122.525    11.17   109.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60450)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         97.16        0.0450
                  3.00         96.00        0.0450
                  6.00         95.32        0.0450
                  9.00         94.64        0.0450
                 12.00         94.43        0.0450
                 15.00         94.29        0.0450
                 18.00         94.10        0.0350      Main Channel
                 21.00         94.02        0.0350      Main Channel
                 24.00         93.70        0.0350      Main Channel
                 27.00         94.22    0.0350 /0.0450  Main Channel
                 30.00         94.90        0.0450
                 32.00         95.30        0.0450
                 34.00         95.78        0.0450
                 36.00         96.25        0.0450
                 38.00         96.60        0.0450
                 48.00         97.14        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.13    93.83    .942E+02        0.1         0.39      30.45
        0.27    93.96    .377E+03        0.3         0.62      19.18
        0.40    94.09    .911E+03        0.9         0.69      17.28
        0.59    94.29    .230E+04        3.4         1.06      11.15
        0.78    94.48    .428E+04        7.9         1.32       8.98
        0.97    94.67    .679E+04       14.6         1.53       7.74
        1.16    94.86    .963E+04       23.7         1.75       6.77
        1.35    95.05    .127E+05       34.9         1.96       6.07
        1.54    95.24    .160E+05       48.1         2.14       5.54
        1.73    95.43    .196E+05       63.6         2.31       5.13
        1.92    95.62    .233E+05       81.2         2.48       4.79
        2.11    95.81    .273E+05      101.0         2.63       4.51
        2.30    96.00    .315E+05      123.0         2.78       4.27
        2.49    96.19    .360E+05      147.8         2.93       4.06
        2.68    96.38    .406E+05      174.6         3.07       3.87
        2.87    96.57    .454E+05      203.7         3.20       3.71
        3.06    96.76    .505E+05      232.7         3.28       3.62
        3.25    96.95    .562E+05      264.9         3.36       3.54
        3.44    97.14    .624E+05      300.8         3.43       3.46

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50450) 1796.04   122.52   11.17 109.45      2.30      2.77
   OUTFLOW: ID= 1 ( 60450) 1796.04   122.45   11.25 109.45      2.30      2.77
```

```
| CALIB            |
| STANDHYD ( 40460)|   Area    (ha)=  22.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.56   Dir. Conn.(%)=  52.84
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      15.36          7.04
     Dep. Storage     (mm)=       2.00          6.68
     Average Slope     (%)=       2.40          2.40
     Length            (m)=     386.43         40.00
     Mannings n           =      0.015         0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83         77.40
                   over (min)        5.00         15.00
     Storage Coeff.  (min)=       6.22 (ii)     14.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.19          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.74          1.48          3.219 (iii)
     TIME TO PEAK    (hrs)=      10.17         10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34        183.55         197.70
     TOTAL RAINFALL   (mm)=     212.34        212.34         212.34
     RUNOFF COEFFICIENT   =       0.99          0.86           0.93

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  86.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| ADD HYD  ( 50460)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40460):    22.40    3.219    10.17   197.70
     + ID2= 2 ( 60450):  1796.04  122.450    11.25   109.45
       ================================================
       ID = 3 ( 50460):  1818.44  124.291    11.17   110.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
| ROUTE CHN( 60460)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
              <------ DATA FOR SECTION (   1.1) ------>
              Distance      Elevation       Manning
                  0.00         91.61        0.0450
                  3.00         91.57        0.0450
                  6.00         91.15        0.0450
                  9.00         90.70        0.0450
                 12.00         89.72        0.0450
                 15.00         88.86        0.0450
                 18.00         88.38    0.0450 /0.0350  Main Channel
                 21.00         87.96        0.0350      Main Channel
                 24.00         88.18    0.0350 /0.0450  Main Channel
                 26.00         88.19        0.0450
                 28.00         88.30        0.0450
                 30.00         90.32        0.0450
                 32.00         90.49        0.0450
                 34.00         90.80        0.0450
                 36.00         90.85        0.0450
                 38.00         90.97        0.0450
                 40.00         91.15        0.0450
                 42.00         91.29        0.0450
                 44.00         91.40        0.0450
                 46.00         91.56        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
```

06121>	0.11	88.07	.589E+02	0.0	0.34	23.89
06122>	0.21	88.18	.235E+03	0.3	0.54	15.05
06123>	0.41	88.38	.106E+04	1.8	0.85	9.64
06124>	0.61	88.57	.211E+04	5.3	1.22	6.69
06125>	0.81	88.77	.330E+04	10.2	1.51	5.40
06126>	1.01	88.97	.462E+04	16.6	1.76	4.63
06127>	1.21	89.17	.603E+04	24.5	1.99	4.10
06128>	1.41	89.37	.753E+04	33.8	2.19	3.72
06129>	1.61	89.57	.912E+04	44.4	2.38	3.42
06130>	1.81	89.77	.108E+05	56.4	2.56	3.19
06131>	2.00	89.97	.125E+05	69.9	2.72	2.99
06132>	2.20	90.17	.144E+05	84.7	2.88	2.83
06133>	2.40	90.37	.163E+05	99.8	3.00	2.72
06134>	2.60	90.56	.184E+05	114.7	3.04	2.68
06135>	2.80	90.76	.208E+05	132.8	3.13	2.61
06136>	3.00	90.96	.235E+05	148.4	3.09	2.64
06137>	3.20	91.16	.266E+05	170.7	3.13	2.60
06138>	3.40	91.36	.302E+05	194.9	3.16	2.58
06139>	3.60	91.56	.342E+05	223.5	3.20	2.55

		<---- hydrograph ---->			<-pipe / channel->	
06142>		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
06143>		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
06144>	INFLOW : ID= 2 (50460)	1818.44	124.29	11.17	110.53	2.71	3.09
06145>	OUTFLOW: ID= 1 (60460)	1818.44	124.32	11.25	110.53	2.70	3.09

06149> --
06150> --------------------
06151> | CALIB |
06152> | STANDHYD (40470)| Area (ha)= 90.19
06153> |ID= 1 DT= 5.0 min | Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00
06154> --------------------

			IMPERVIOUS	PERVIOUS (i)
06156>	Surface Area	(ha)=	59.53	30.66
06157>	Dep. Storage	(mm)=	2.00	5.90
06158>	Average Slope	(%)=	1.40	1.40
06159>	Length	(m)=	775.42	40.00
06160>	Mannings n	=	0.015	0.280

06162> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

	---- TRANSFORMED HYETOGRAPH ----							
06166>	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
06167>	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
06168>	0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
06169>	0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
06170>	0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
06171>	0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
06172>	0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
06173>	0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
06174>	0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
06175>	0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
06176>	0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
06177>	0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
06178>	0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
06179>	1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
06180>	1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
06181>	1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
06182>	1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
06183>	1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
06184>	1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
06185>	1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
06186>	1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
06187>	1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
06188>	1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
06189>	1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
06190>	1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
06191>	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
06192>	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
06193>	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
06194>	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
06195>	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
06196>	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
06197>	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
06198>	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
06199>	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
06200>	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
06201>	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
06202>	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
06203>	3.000	6.35	6.083	13.97	9.167	12.70		
06204>	3.083	6.35	6.167	13.97	9.250	52.83		

					TOTALS
06206>	Max.Eff.Inten.(mm/hr)=	52.83	70.01		
06207>	over (min)	10.00	25.00		
06208>	Storage Coeff. (min)=	11.10 (ii)	20.80 (ii)		
06209>	Unit Hyd. Tpeak (min)=	10.00	25.00		
06210>	Unit Hyd. peak (cms)=	0.10	0.05		
06212>	PEAK FLOW (cms)=	7.11	5.52		12.580 (iii)
06213>	TIME TO PEAK (hrs)=	10.17	10.25		10.17
06214>	RUNOFF VOLUME (mm)=	210.34	185.18		198.77
06215>	TOTAL RAINFALL (mm)=	212.34	212.34		212.34
06216>	RUNOFF COEFFICIENT =	0.99	0.87		0.94

06218>
06219> (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06220> CN* = 88.0 Ia = Dep. Storage (Above)
06221> (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06222> THAN THE STORAGE COEFFICIENT.
06223> (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06224>
06225> --
06226>
06227> --------------------
06228> | ADD HYD (50470)|
06229> | 1 + 2 = 3 |
06230> --------------------

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
06231> ID1= 1 (40470):	90.19	12.580	10.17	198.77
06232> + ID2= 2 (60460):	1818.44	124.320	11.25	110.53
06233>	==========	==========	==========	==========
06234> ID = 3 (50470):	1908.63	133.393	11.17	114.70

06235>
06236> NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06237> --
06238> --------------------
06239> | ROUTE CHN(60470)|
06240> | IN= 2---> OUT= 1 | Routing time step (min)'= 5.00
06241> --------------------

<------ DATA FOR SECTION (1.1) ------>			
06243>	Distance	Elevation	Manning	
06244>	0.00	89.19	0.0450	
06245>	2.00	88.89	0.0450	
06246>	4.00	88.54	0.0450	
06247>	6.00	88.31	0.0450	
06248>	8.00	88.14	0.0450	
06249>	10.00	88.02	0.0450	
06250>	12.00	87.99	0.0450	
06251>	14.00	87.90	0.0450	
06252>	16.00	87.84	0.0450	
06253>	19.00	87.55	0.0450	
06254>	22.00	86.85	0.0450	
06255>	25.00	86.23	0.0350	Main Channel
06256>	28.00	86.23	0.0350	Main Channel
06257>	31.00	86.60	0.0450	
06258>	34.00	87.49	0.0450	
06259>	37.00	88.15	0.0450	
06260>	41.00	88.21	0.0450	
06261>	45.00	88.29	0.0450	
06262>	48.00	88.36	0.0450	
06263>	50.00	89.13	0.0450	

06264>

<---------- TRAVEL TIME TABLE ---------->					
06266>	DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
06267>	(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
06268>	0.01	86.23	.467E+01	0.0	0.03	307.39
06269>	0.16	86.38	.381E+03	0.3	0.45	22.82
06270>	0.31	86.54	.942E+03	1.0	0.65	15.77
06271>	0.46	86.69	.167E+04	2.3	0.85	12.10
06272>	0.61	86.84	.253E+04	4.2	1.03	9.95
06273>	0.77	86.99	.350E+04	6.7	1.18	8.66
06274>	0.92	87.15	.458E+04	9.8	1.32	7.78
06275>	1.07	87.30	.576E+04	13.5	1.44	7.13
06276>	1.22	87.45	.706E+04	17.7	1.54	6.63
06277>	1.38	87.60	.847E+04	22.5	1.63	6.28
06278>	1.53	87.76	.101E+05	27.8	1.69	6.05
06279>	1.68	87.91	.119E+05	33.3	1.72	5.97
06280>	1.83	88.06	.142E+05	39.8	1.72	5.96
06281>	1.99	88.21	.170E+05	47.4	1.71	5.97
06282>	2.14	88.36	.206E+05	57.3	1.71	5.99
06283>	2.29	88.52	.247E+05	70.7	1.76	5.81
06284>	2.44	88.67	.289E+05	86.1	1.83	5.59
06285>	2.60	88.82	.332E+05	103.2	1.91	5.36
06286>	2.75	88.97	.376E+05	121.7	1.99	5.15

06287>
06288> **** WARNING: TRAVEL TIME TABLE EXCEEDED

	<---- hydrograph ---->				<-pipe / channel->	
06290>		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
06291>		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
06292>	INFLOW : ID= 2 (50470)	1908.63	133.39	11.17	114.70	2.74	1.98
06293>	OUTFLOW: ID= 1 (60470)	1908.63	132.85	11.25	114.70	2.75	1.99

06294>
06295>
06296>
06297> --
06298> --------------------
06299> | CALIB |
06300> | STANDHYD (40480)| Area (ha)= 56.43
06301> |ID= 1 DT= 5.0 min | Total Imp(%)= 75.88 Dir. Conn.(%)= 58.98
06302> --------------------

		IMPERVIOUS	PERVIOUS (i)
06304> Surface Area	(ha)=	42.82	13.61
06305> Dep. Storage	(mm)=	2.00	5.80
06306> Average Slope	(%)=	1.90	1.90
06307> Length	(m)=	613.35	40.00
06308> Mannings n	=	0.015	0.260

06309>
06310> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.
06311>
06312>

	---- TRANSFORMED HYETOGRAPH ----							
06314>	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
06315>	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
06316>	0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
06317>	0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
06318>	0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
06319>	0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
06320>	0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
06321>	0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
06322>	0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
06323>	0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
06324>	0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
06325>	0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
06326>	0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
06327>	1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
06328>	1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
06329>	1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
06330>	1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
06331>	1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
06332>	1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
06333>	1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
06334>	1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
06335>	1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
06336>	1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
06337>	1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
06338>	1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
06339>	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
06340>	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
06341>	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
06342>	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
06343>	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
06344>	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
06345>	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
06346>	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
06347>	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
06348>	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
06349>	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
06350>	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
06351>	3.000	6.35	6.083	13.97	9.167	12.70		
06352>	3.083	6.35	6.167	13.97	9.250	52.83		

06353>

				TOTALS
06354> Max.Eff.Inten.(mm/hr)=	52.83	88.99		
06355> over (min)	10.00	20.00		
06356> Storage Coeff. (min)=	8.80 (ii)	16.49 (ii)		
06357> Unit Hyd. Tpeak (min)=	10.00	20.00		
06358> Unit Hyd. peak (cms)=	0.12	0.06		
06360> PEAK FLOW (cms)=	4.88	3.24		8.116 (iii)
06361> TIME TO PEAK (hrs)=	10.17	10.17		10.17
06362> RUNOFF VOLUME (mm)=	210.34	193.56		203.46
06363> TOTAL RAINFALL (mm)=	212.34	212.34		212.34
06364> RUNOFF COEFFICIENT =	0.99	0.91		0.96

06365>
06366>
06367> (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
06368> CN* = 90.0 Ia = Dep. Storage (Above)
06369> (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
06370> THAN THE STORAGE COEFFICIENT.
06371> (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
06372>
06373> --
06374>
06375> --------------------
06376> | ADD HYD (50480)|
06377> | 1 + 2 = 3 |
06378> --------------------

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
06379> ID1= 1 (40480):	56.43	8.116	10.17	203.46
06380> + ID2= 2 (60470):	1908.63	132.847	11.25	114.70
06381>	==========	==========	==========	==========
06382> ID = 3 (50480):	1965.06	138.305	11.25	117.25

06383>
06384> NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
06385> --
06386> --------------------
06387> | ROUTE CHN(60480)|
06388> | IN= 2---> OUT= 1 | Routing time step (min)'= 5.00
06389> --------------------

<------ DATA FOR SECTION (1.1) ------>			
06391>	Distance	Elevation	Manning	
06392>	0.00	86.90	0.0450	
06393>	2.00	86.76	0.0450	
06394>	4.00	85.96	0.0450	
06395>	6.00	85.44	0.0450	
06396>	8.00	84.83	0.0450	
06397>	10.00	84.50	0.0450	
06398>	12.00	84.15	0.0450	
06399>	14.00	83.85	0.0350	Main Channel
06400>	16.00	83.86	0.0350	Main Channel
06401>	18.00	83.99	0.0350 /0.0450	Main Channel
06402>	20.00	84.27	0.0450	
06403>	22.00	84.55	0.0450	
06404>	24.00	84.88	0.0450	
06405>	26.00	85.37	0.0450	
06406>	27.00	85.68	0.0450	
06407>	28.00	85.91	0.0450	
06408>	29.00	86.08	0.0450	
06409>	30.00	86.21	0.0450	
06410>	31.00	86.29	0.0450	
06411>	34.00	86.87	0.0450	

06412>

<---------- TRAVEL TIME TABLE ---------->					
06414>	DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
06415>	(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
06416>	0.16	84.01	.165E+03	0.3	0.48	10.34
06417>	0.32	84.17	.460E+03	1.2	0.77	6.41
06418>	0.48	84.33	.855E+03	2.8	0.98	5.07
06419>	0.64	84.48	.135E+04	5.2	1.14	4.35
06420>	0.80	84.64	.193E+04	8.3	1.28	3.88
06421>	0.95	84.80	.261E+04	12.3	1.40	3.53
06422>	1.11	84.96	.337E+04	17.4	1.53	3.23
06423>	1.27	85.12	.419E+04	23.5	1.66	2.97
06424>	1.43	85.28	.506E+04	30.5	1.79	2.77
06425>	1.59	85.44	.599E+04	38.5	1.90	2.60
06426>	1.75	85.60	.697E+04	47.3	2.01	2.46

06427>	1.91	85.76	.801E+04	57.1	2.12	2.34
06428>	2.07	85.92	.911E+04	67.8	2.21	2.24
06429>	2.23	86.07	.103E+05	79.5	2.30	2.15
06430>	2.39	86.23	.115E+05	91.9	2.37	2.09
06431>	2.54	86.39	.128E+05	105.7	2.45	2.02
06432>	2.70	86.55	.142E+05	121.2	2.53	1.95
06433>	2.86	86.71	.156E+05	138.0	2.62	1.89
06434>	3.02	86.87	.171E+05	153.0	2.65	1.87

		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
			<---- hydrograph ---->			<-pipe / channel->	
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
06439>	INFLOW : ID= 2 (50480)	1965.06	138.31	11.25	117.25	2.87	2.62
06440>	OUTFLOW: ID= 1 (60480)	1965.06	138.32	11.25	117.25	2.86	2.62

06444> ---

06445> ---

06446> | CALIB |

06447> | STANDHYD (40490)| Area (ha)= 16.76

06448> |ID= 1 DT= 5.0 min | Total Imp(%)= 75.18 Dir. Conn.(%)= 60.42

06449> ---

		IMPERVIOUS	PERVIOUS (i)
06451>	Surface Area (ha)=	12.60	4.16
06452>	Dep. Storage (mm)=	2.00	6.22
06453>	Average Slope (%)=	1.40	1.40
06454>	Length (m)=	334.28	53.00
06455>	Mannings n =	0.015	0.270

06457> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

06501>	Max.Eff.Inten.(mm/hr)=	52.83	83.32
06502>	over (min)	5.00	20.00
06503>	Storage Coeff. (min)=	6.70 (ii)	17.18 (ii)
06504>	Unit Hyd. Tpeak (min)=	5.00	20.00
06505>	Unit Hyd. peak (cms)=	0.18	0.06
06506>			*TOTALS*
06507>	PEAK FLOW (cms)=	1.49	0.92 2.408 (iii)
06508>	TIME TO PEAK (hrs)=	10.17	10.17 10.17
06509>	RUNOFF VOLUME (mm)=	210.34	192.13 203.13
06510>	TOTAL RAINFALL (mm)=	212.34	212.34 212.34
06511>	RUNOFF COEFFICIENT =	0.99	0.90 0.96

06514> (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

06515> CN* = 90.0 Ia = Dep. Storage (Above)

06516> (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

06517> THAN THE STORAGE COEFFICIENT.

06518> (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

06520> ---

06522> ---

06523> | ADD HYD (50490)|

06524> | 1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
06526> ID1= 1 (40490):	16.76	2.408	10.17	203.13
06527> + ID2= 2 (60480):	1965.06	138.324	11.25	117.25
06529> ID = 3 (50490):	1981.82	139.698	11.25	117.98

06531> NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

06532> ---

06533> ---

06534> | ROUTE CHN(60490)|

06535> | IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

06536> ---

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	85.84	0.0450	
6.00	84.32	0.0450	
12.00	84.21	0.0450	
18.00	84.12	0.0450	
24.00	84.08	0.0450	
30.00	84.10	0.0450	
36.00	84.03	0.0450	
42.00	83.92	0.0450	
48.00	83.88	0.0450	
54.00	82.88	0.0350	Main Channel
60.00	83.12	0.0350 /0.0450	Main Channel
64.00	83.65	0.0450	
68.00	83.60	0.0450	
72.00	83.67	0.0450	
76.00	83.70	0.0450	
80.00	83.82	0.0450	
84.00	83.90	0.0450	
88.00	84.05	0.0450	
92.00	84.16	0.0450	
100.00	85.83	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	83.04	.332E+03	0.1	0.32	46.08
0.31	83.19	.129E+04	0.8	0.57	26.14
0.47	83.35	.259E+04	2.3	0.79	18.75
0.62	83.50	.418E+04	4.5	0.96	15.43
0.78	83.66	.626E+04	7.3	1.04	14.28
0.93	83.81	.101E+05	11.9	1.05	14.10
1.09	83.97	.153E+05	17.6	1.02	14.55
1.24	84.13	.231E+05	26.2	1.00	14.73
1.40	84.28	.341E+05	41.2	1.07	13.79
1.55	84.44	.460E+05	61.7	1.19	12.44
1.71	84.59	.582E+05	86.6	1.32	11.21
1.86	84.75	.706E+05	115.2	1.45	10.21
2.02	84.90	.831E+05	147.5	1.57	9.39
2.17	85.06	.959E+05	183.2	1.70	8.72
2.33	85.21	.109E+06	222.2	1.81	8.16
2.48	85.37	.122E+06	264.5	1.93	7.68
2.64	85.52	.135E+06	310.0	2.03	7.27
2.79	85.68	.149E+06	358.5	2.14	6.91
2.95	85.83	.162E+06	410.1	2.24	6.60

		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
			<---- hydrograph ---->			<-pipe / channel->	
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
06586>	INFLOW : ID= 2 (50490)	1981.82	139.70	11.25	117.98	1.98	1.54
06587>	OUTFLOW: ID= 1 (60490)	1981.82	138.56	11.33	117.98	1.97	1.54

06591> ---

06592> ---

06593> | CALIB |

06594> | STANDHYD (40810)| Area (ha)= 20.64

06595> |ID= 1 DT= 5.0 min | Total Imp(%)= 77.13 Dir. Conn.(%)= 61.23

06596> ---

		IMPERVIOUS	PERVIOUS (i)
06598>	Surface Area (ha)=	15.92	4.72
06599>	Dep. Storage (mm)=	2.00	5.43
06600>	Average Slope (%)=	2.10	2.10
06601>	Length (m)=	370.92	40.00
06602>	Mannings n =	0.015	0.260

06604> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

06648>	Max.Eff.Inten.(mm/hr)=	52.83	88.71
06649>	over (min)	5.00	15.00
06650>	Storage Coeff. (min)=	6.32 (ii)	13.79 (ii)
06651>	Unit Hyd. Tpeak (min)=	5.00	15.00
06652>	Unit Hyd. peak (cms)=	0.19	0.08
06653>			*TOTALS*
06654>	PEAK FLOW (cms)=	1.85	1.14 2.997 (iii)
06655>	TIME TO PEAK (hrs)=	10.17	10.17 10.17
06656>	RUNOFF VOLUME (mm)=	210.34	193.72 203.89
06657>	TOTAL RAINFALL (mm)=	212.34	212.34 212.34
06658>	RUNOFF COEFFICIENT =	0.99	0.91 0.96

06661> (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

06662> CN* = 90.0 Ia = Dep. Storage (Above)

06663> (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

06664> THAN THE STORAGE COEFFICIENT.

06665> (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

06667> ---

06669> ---

06670> | ADD HYD (50810)|

06671> | 1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
06673> ID1= 1 (40810):	20.64	2.997	10.17	203.89
06674> + ID2= 2 (60490):	1981.82	138.564	11.33	117.98
06676> ID = 3 (50810):	2002.46	139.900	11.33	118.86

06678> NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

06679> ---

06680> ---

06681> | CALIB |

06682> | STANDHYD (40500)| Area (ha)= 9.32

06683> |ID= 1 DT= 5.0 min | Total Imp(%)= 26.99 Dir. Conn.(%)= 17.48

06684> ---

		IMPERVIOUS	PERVIOUS (i)
06686>	Surface Area (ha)=	2.52	6.81
06687>	Dep. Storage (mm)=	2.00	9.76
06688>	Average Slope (%)=	3.20	3.20
06689>	Length (m)=	249.31	47.00
06690>	Mannings n =	0.015	0.350

06692> NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70

```
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        57.92
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.39 (ii)   14.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.23         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.24         1.07         1.308 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17        10.17
     RUNOFF VOLUME    (mm)=     210.34       177.07       182.88
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.83         0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  88.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50500)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40500):     9.32   1.308    10.17   182.88
       + ID2= 2 ( 50810):  2002.46 139.900    11.33   118.86
         ================================================
        ID = 3 ( 50500):  2011.78 140.680    11.25   119.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   4.24   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.46

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.352

     PEAK FLOW       (cms)=   0.553 (i)
     TIME TO PEAK    (hrs)=  10.333
     RUNOFF VOLUME    (mm)= 190.339
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area    (ha)=  14.62   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.45

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   1.241

     PEAK FLOW       (cms)=   1.917 (i)
     TIME TO PEAK    (hrs)=  10.333
     RUNOFF VOLUME    (mm)= 190.337
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area    (ha)=   0.93   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.154

     PEAK FLOW       (cms)=   0.134 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.142
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         0.00
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.40         1.00
     Length            (m)=      48.30         0.00
     Mannings n            =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.81 (ii)    2.81 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.28         0.28
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.00         0.066 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.17        10.17
     RUNOFF VOLUME    (mm)=     210.34       190.35       210.13
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.90         0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=  26.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  30.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.25        13.25
     Dep. Storage     (mm)=       2.00         1.50
```

```
      Average Slope     (%)=       2.00         2.00
      Length            (m)=     420.00        30.00
      Mannings n            =      0.013        0.025

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Max.Eff.Inten.(mm/hr)=      52.83        73.00
                   over (min)        5.00        10.00
      Storage Coeff.  (min)=       6.34 (ii)    8.70 (ii)
      Unit Hyd. Tpeak (min)=       5.00        10.00
      Unit Hyd. peak  (cms)=       0.19         0.12
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.17         2.68          3.848 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17         10.17
      RUNOFF VOLUME    (mm)=     210.34       192.87        198.11
      TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
      RUNOFF COEFFICIENT   =       0.99         0.91          0.93

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   3.93
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       3.89         0.04
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.40         1.00
      Length            (m)=     115.50         0.00
      Mannings n            =      0.013        0.030

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Max.Eff.Inten.(mm/hr)=      52.83        52.18
                   over (min)        5.00         5.00
      Storage Coeff.  (min)=       4.73 (ii)    4.73 (ii)
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.22         0.22
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.57         0.01          0.577 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17         10.17
      RUNOFF VOLUME    (mm)=     210.34       190.35        210.14
      TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
      RUNOFF COEFFICIENT   =       0.99         0.90          0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  93.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.93    0.134    10.17   190.14
      + ID2= 2 (******):    26.50    3.848    10.17   198.11
        ================================================
        ID = 3 (******):    27.43    3.981    10.17   197.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    27.43    3.981    10.17   197.84
      + ID2= 2 (******):     3.93    0.577    10.17   210.14
        ================================================
        ID = 1 (******):    31.36    4.558    10.17   199.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    31.36    4.558    10.17   199.38
      + ID2= 2 (******):     0.45    0.066    10.17   210.13
        ================================================
        ID = 3 (******):    31.81    4.624    10.17   199.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    14.62    1.917    10.33   190.34
      + ID2= 2 (******):    31.81    4.624    10.17   199.53
        ================================================
        ID = 3 (******):    46.43    6.478    10.17   196.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0450
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.05  441.45    .114E+03       0.0         0.27      55.89
         0.11  441.50    .457E+03       0.2         0.43      35.21
         0.16  441.56    .103E+04       0.6         0.57      26.87
         0.22  441.61    .185E+04       1.4         0.67      22.84
         0.27  441.67    .297E+04       2.5         0.77      19.84
         0.33  441.72    .437E+04       4.1         0.87      17.59
         0.38  441.78    .605E+04       6.4         0.96      15.85
         0.44  441.83    .802E+04       9.2         1.05      14.47
         0.49  441.89    .103E+05      12.8         1.14      13.35
         0.55  441.94    .128E+05      17.2         1.23      12.42
         0.60  442.00    .157E+05      22.4         1.31      11.63
         0.66  442.05    .188E+05      28.3         1.38      11.07
         0.71  442.11    .225E+05      36.9         1.50      10.16
         0.78  442.17    .277E+05      48.4         1.60       9.54
         0.84  442.24    .339E+05      61.9         1.67       9.13
         0.91  442.30    .412E+05      77.1         1.71       8.90
         0.97  442.36    .495E+05      94.7         1.75       8.71
         1.03  442.43    .589E+05     114.9         1.79       8.54
         1.10  442.49    .693E+05     137.9         1.82       8.38

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    46.43     6.48    10.17 196.64      0.39      0.97
   OUTFLOW: ID= 1 (******)    46.43     6.15    10.25 196.63      0.38      0.95


--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.92     0.00     0.00     0.00     0.00     0.92
        1.00     0.73     0.00     0.00     0.00     1.73
        1.00     1.11     0.00     0.00     0.00     2.11
        1.00     1.60     0.00     0.00     0.00     2.60
        1.00     2.08     0.00     0.00     0.00     3.08
        1.00     2.63     0.00     0.00     0.00     3.63
        1.00     4.53     0.00     0.00     0.00     5.53
                      OUTFLOW TABLES EXCEEDED

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
   TOTAL HYD.(ID= 1):       46.43      6.15     10.25  196.63
   ================================================
   ID= 2  (   2)    :       19.33      1.11     10.25  196.63
   ID= 3  (   2)    :       27.10      5.04     10.25  196.63
   ID= 4  (   2)    :        0.00      0.00      0.00    0.00
   ID= 5  (   2)    :        0.00      0.00      0.00    0.00
   ID= 6  (   2)    :        0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        443.75        0.0000
                    8.50        443.74        0.0450
                   35.47        443.64        0.0450
                   64.60        443.29        0.0450
                   74.71        443.18        0.0450
                   80.25        443.17        0.0450
                  112.17        443.12    0.0450 /0.0350  Main Channel
                  131.57        442.76        0.0350      Main Channel
                  137.50        442.66        0.0350      Main Channel
                  137.91        442.67        0.0350      Main Channel
                  152.28        442.24        0.0350      Main Channel
                  167.40        441.39        0.0350      Main Channel
                  178.29        441.56        0.0350      Main Channel
                  216.75        442.01        0.0350      Main Channel
                  221.54        442.05    0.0350 /0.0450  Main Channel
                  334.66        442.50        0.0450

       <---------------------- TRAVEL TIME TABLE ---------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
         0.05  441.45    .128E+03       0.0         0.29      60.12
         0.11  441.50    .514E+03       0.2         0.45      37.87
         0.16  441.56    .116E+04       0.7         0.59      28.90
         0.22  441.61    .208E+04       1.4         0.70      24.57
```

```
        0.27   441.67    .333E+04       2.6          0.80      21.34
        0.33   441.72    .490E+04       4.3          0.91      18.92
        0.38   441.78    .680E+04       6.6          1.01      17.05
        0.44   441.83    .901E+04       9.6          1.10      15.57
        0.49   441.89    .115E+05      13.4          1.19      14.36
        0.55   441.94    .144E+05      18.0          1.28      13.36
        0.60   442.00    .176E+05      23.4          1.37      12.51
        0.66   442.05    .211E+05      29.5          1.44      11.91
        0.71   442.11    .253E+05      38.5          1.57      10.93
        0.78   442.17    .311E+05      50.5          1.67      10.26
        0.84   442.24    .381E+05      64.7          1.74       9.82
        0.91   442.30    .463E+05      80.5          1.79       9.57
        0.97   442.36    .556E+05      98.9          1.83       9.37
        1.03   442.43    .661E+05     120.0          1.86       9.19
        1.10   442.49    .779E+05     144.1          1.90       9.01

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    19.33     1.11   10.25 196.63       0.20      0.65
   OUTFLOW: ID= 1 (******)    19.33     1.06   10.33 196.61       0.19      0.64



--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.24   0.553    10.33   190.34
      + ID2= 2 (******):    19.33   1.061    10.33   196.61
        ================================================
        ID = 3 (******):    23.57   1.614    10.33   195.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   2.59   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.29

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.341

     PEAK FLOW       (cms)=   0.367 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.268
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.59   0.367    10.17   190.27
      + ID2= 2 (******):    23.57   1.614    10.33   195.48
        ================================================
        ID = 3 (******):    26.16   1.967    10.33   194.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         429.12        0.0500
                 37.54         428.86        0.0500
                 53.31         428.70        0.0500
                 81.17         428.24        0.0500
                 99.28         428.15    0.0500 /0.0300  Main Channel
                114.53         427.72        0.0300      Main Channel
                119.88         426.51        0.0300      Main Channel
                124.17         425.84        0.0300      Main Channel
                206.01         425.90        0.0300      Main Channel
                209.64         426.51        0.0300      Main Channel
                214.21         426.89        0.0300      Main Channel
                231.49         427.17        0.0300      Main Channel
                268.61         427.89    0.0300 /0.0500  Main Channel
                351.58         428.15        0.0500
                368.27         428.31        0.0500
                405.75         428.52        0.0500
                416.79         428.59        0.0500
                440.06         428.76        0.0500
                469.88         428.97        0.0500

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.16   426.00    .187E+04       9.2          0.88       3.40
       0.31   426.16    .424E+04      35.4          1.49       2.00
       0.47   426.32    .666E+04      74.1          1.98       1.50
       0.63   426.47    .914E+04     123.7          2.41       1.23
       0.79   426.63    .117E+05     182.8          2.79       1.07
       0.94   426.79    .143E+05     251.2          3.13       0.95
       1.10   426.95    .170E+05     323.1          3.39       0.88
       1.26   427.10    .199E+05     394.0          3.52       0.84
       1.42   427.26    .232E+05     479.1          3.69       0.81
       1.57   427.42    .267E+05     577.3          3.86       0.77
       1.73   427.58    .304E+05     687.4          4.03       0.74
       1.89   427.73    .344E+05     808.6          4.20       0.71
       2.05   427.89    .387E+05     927.4          4.28       0.70
       2.23   428.07    .449E+05    1119.2          4.45       0.67
       2.41   428.25    .531E+05    1356.2          4.56       0.65
       2.59   428.43    .627E+05    1638.9          4.66       0.64
       2.77   428.61    .737E+05    1955.8          4.73       0.63
       2.95   428.79    .859E+05    2310.2          4.79       0.62
       3.13   428.97    .996E+05    2701.5          4.84       0.61

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    26.16     1.97   10.33 194.97       0.03      0.88
   OUTFLOW: ID= 1 (******)    26.16     1.96   10.33 194.97       0.03      0.88



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  11.13   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.42

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   1.012

     PEAK FLOW       (cms)=   1.483 (i)
     TIME TO PEAK    (hrs)=  10.333
     RUNOFF VOLUME    (mm)= 190.333
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.75   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.22

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.130

     PEAK FLOW       (cms)=   0.108 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.102
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.895

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40600)|   Area     (ha)=  78.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.08   Dir. Conn.(%)=  56.26
--------------------

                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       54.14         24.23
     Dep. Storage     (mm)=        2.00          5.78
     Average Slope     (%)=        1.20          1.20
     Length            (m)=      722.82         47.00
     Mannings n           =       0.015         0.260

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
```

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	73.72	
over (min)	10.00	25.00	
Storage Coeff. (min)=	11.15 (ii)	21.63 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.10	0.05	
			TOTALS
PEAK FLOW (cms)=	6.44	4.57	10.965 (iii)
TIME TO PEAK (hrs)=	10.17	10.25	10.17
RUNOFF VOLUME (mm)=	210.34	190.05	201.46
TOTAL RAINFALL (mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT =	0.99	0.90	0.95

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(60610)|
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	144.07	0.0450	
9.00	143.84	0.0450	
12.00	142.90	0.0450	
15.00	142.48	0.0450	
18.00	142.43	0.0450 /0.0350	Main Channel
21.00	142.31	0.0350	Main Channel
24.00	142.12	0.0350	Main Channel
27.00	142.44	0.0350 /0.0450	Main Channel
30.00	142.71	0.0450	
33.00	143.18	0.0450	
36.00	143.27	0.0450	
37.00	143.36	0.0450	
38.00	143.64	0.0450	
39.00	143.92	0.0450	
40.00	143.93	0.0450	
45.00	144.18	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	142.20	.282E+02	0.0	0.24	26.26
0.16	142.27	.113E+03	0.1	0.38	16.54
0.23	142.35	.257E+03	0.3	0.48	13.09
0.31	142.43	.477E+03	0.7	0.57	11.02
0.42	142.54	.969E+03	2.0	0.76	8.24
0.53	142.65	.157E+04	3.8	0.92	6.80
0.64	142.76	.224E+04	6.3	1.06	5.90
0.75	142.87	.299E+04	9.5	1.19	5.26
0.86	142.98	.379E+04	13.2	1.31	4.77
0.97	143.09	.463E+04	17.6	1.43	4.37
1.08	143.20	.552E+04	22.5	1.53	4.09
1.19	143.31	.653E+04	27.9	1.60	3.90
1.30	143.42	.761E+04	34.4	1.70	3.69
1.41	143.53	.874E+04	41.7	1.79	3.49
1.52	143.64	.989E+04	49.7	1.89	3.32
1.63	143.75	.111E+05	58.3	1.98	3.17
1.74	143.85	.123E+05	66.9	2.04	3.06
1.85	143.96	.137E+05	73.2	2.01	3.11
1.96	144.07	.153E+05	81.5	2.00	3.13

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (40600)	78.37	10.97	10.17	201.46	0.79	1.24
OUTFLOW: ID= 1 (60600)	78.37	10.86	10.17	201.46	0.79	1.23

CALIB
STANDHYD (40610)| Area (ha)= 3.94
ID= 1 DT= 5.0 min | Total Imp(%)= 44.52 Dir. Conn.(%)= 31.62

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.75	2.18
Dep. Storage (mm)=	2.00	8.00
Average Slope (%)=	2.90	2.90
Length (m)=	162.03	40.00
Mannings n =	0.015	0.340

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	63.51		
over (min)	5.00	15.00		
Storage Coeff. (min)=	3.49 (ii)	12.59 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.26	0.08		
				TOTALS
PEAK FLOW (cms)=	0.18	0.38		0.563 (iii)
TIME TO PEAK (hrs)=	10.17	10.17		10.17
RUNOFF VOLUME (mm)=	210.34	181.12		190.36
TOTAL RAINFALL (mm)=	212.34	212.34		212.34
RUNOFF COEFFICIENT =	0.99	0.85		0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 88.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50600)|

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (40610):	3.94	0.563	10.17	190.36
+ ID2= 2 (60600):	78.37	10.861	10.17	201.46
ID = 3 (50600):	82.31	11.423	10.17	200.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60610)|
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	143.40	0.0450	
2.00	142.92	0.0450	
4.00	142.14	0.0450	
6.00	141.49	0.0450	
8.00	141.11	0.0450	
10.00	141.00	0.0450 /0.0350	Main Channel
12.00	140.98	0.0350	Main Channel
14.00	140.82	0.0350	Main Channel
16.00	141.02	0.0350 /0.0450	Main Channel
18.00	141.19	0.0450	
20.00	141.19	0.0450	
22.00	141.44	0.0450	
24.00	142.00	0.0450	
26.00	142.20	0.0450	
28.00	142.39	0.0450	
30.00	142.96	0.0450	
31.00	143.13	0.0450	
32.00	143.28	0.0450	
33.00	143.41	0.0450	
34.00	143.44	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.09	140.91	.314E+02	0.0	0.24	23.12
0.18	141.00	.132E+03	0.1	0.31	17.83
0.33	141.14	.502E+03	0.9	0.58	9.54
0.47	141.29	.107E+04	2.4	0.74	7.47
0.61	141.43	.175E+04	4.7	0.89	6.20
0.75	141.57	.251E+04	7.9	1.05	5.31
0.89	141.71	.332E+04	11.8	1.19	4.68
1.03	141.85	.416E+04	16.5	1.32	4.21
1.17	141.99	.506E+04	21.8	1.44	3.86
1.31	142.13	.601E+04	27.5	1.52	3.64
1.45	142.27	.705E+04	34.0	1.61	3.46
1.59	142.41	.818E+04	41.5	1.69	3.29
1.73	142.55	.936E+04	50.2	1.79	3.11
1.88	142.69	.106E+05	59.8	1.88	2.95
2.02	142.84	.118E+05	70.2	1.97	2.81
2.16	142.98	.132E+05	81.2	2.06	2.70
2.30	143.12	.145E+05	92.6	2.12	2.61
2.44	143.26	.159E+05	104.8	2.19	2.54
2.58	143.40	.174E+05	117.7	2.24	2.47

	<---- hydrograph ----> AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50600)	82.31	11.42	10.17	200.93	0.88	1.17
OUTFLOW: ID= 1 (60610)	82.31	11.39	10.25	200.93	0.87	1.17

CALIB
STANDHYD (40620)| Area (ha)= 5.67
ID= 1 DT= 5.0 min | Total Imp(%)= 75.85 Dir. Conn.(%)= 60.66

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.30	1.37
Dep. Storage (mm)=	2.00	5.59
Average Slope (%)=	1.50	1.50
Length (m)=	194.41	43.00
Mannings n =	0.015	0.270

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70

```
                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        85.18
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.74 (ii)   13.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.50         0.32        0.823 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17       10.17
     RUNOFF VOLUME    (mm)=     210.34       192.91      203.48
     TOTAL RAINFALL   (mm)=     212.34       212.34      212.34
     RUNOFF COEFFICIENT   =       0.99         0.91        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50610)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40620):     5.67   0.823    10.17   203.48
     + ID2= 2 ( 60610):    82.31  11.388    10.25   200.93
       ==========================================================
       ID = 3 ( 50610):    87.98  12.143    10.17   201.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60620)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                  0.00         142.03        0.0450
                  1.00         141.71        0.0450
                  2.00         141.35        0.0450
                  3.00         141.01        0.0450
                  4.00         140.79        0.0450
                  5.00         140.56        0.0450
                  6.00         140.44        0.0450
                  7.00         140.30    0.0450 /0.0350  Main Channel
                  8.00         140.08        0.0350      Main Channel
                  9.00         139.88        0.0350      Main Channel
                 10.00         139.97        0.0350      Main Channel
                 11.00         140.12        0.0350      Main Channel
                 12.00         140.35    0.0350 /0.0450  Main Channel
                 13.00         140.52        0.0450
                 14.00         140.73        0.0450
                 15.00         140.97        0.0450
                 16.00         141.27        0.0450
                 17.00         141.57        0.0450
                 18.00         141.89        0.0450
                 19.00         142.07        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10   139.99    .161E+02        0.0         0.36       8.21
        0.21   140.09    .579E+02        0.2         0.59       5.04
        0.31   140.19    .120E+03        0.5         0.78       3.79
        0.42   140.30    .200E+03        1.1         0.95       3.12
        0.53   140.41    .313E+03        2.1         1.18       2.51
        0.65   140.53    .456E+03        3.5         1.36       2.18
        0.76   140.65    .630E+03        5.3         1.50       1.98
        0.88   140.76    .826E+03        7.6         1.63       1.82
        0.99   140.88    .104E+04       10.3         1.75       1.69
        1.11   140.99    .128E+04       13.4         1.87       1.59
        1.23   141.11    .154E+04       17.1         1.98       1.50
        1.34   141.22    .180E+04       21.2         2.09       1.42
        1.46   141.34    .209E+04       25.8         2.20       1.35
        1.57   141.45    .239E+04       30.9         2.30       1.29
        1.69   141.57    .270E+04       36.4         2.40       1.24
        1.80   141.69    .303E+04       42.4         2.49       1.19
        1.92   141.80    .337E+04       48.9         2.58       1.15
        2.04   141.92    .373E+04       55.9         2.67       1.11
        2.15   142.03    .411E+04       63.2         2.74       1.08

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50610)   87.98    12.14   10.17 201.09      1.06      1.82
   OUTFLOW: ID= 1 ( 60620)   87.98    12.14   10.25 201.09      1.06      1.82

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--------------------
| CALIB            |
| STANDHYD ( 40640)|   Area    (ha)=   2.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  42.54   Dir. Conn.(%)=  31.60
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.91         1.23
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     119.23        45.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        61.46
                   over (min)       5.00        15.00
     Storage Coeff.  (min)=       3.41 (ii)   14.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.20        0.303 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.17       10.17
     RUNOFF VOLUME    (mm)=     210.34       182.58      191.35
     TOTAL RAINFALL   (mm)=     212.34       212.34      212.34
     RUNOFF COEFFICIENT   =       0.99         0.86        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50630)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40640):     2.13   0.303    10.17   191.35
     + ID2= 2 ( 60620):    87.98  12.142    10.25   201.09
       ==========================================================
       ID = 3 ( 50630):    90.11  12.421    10.25   200.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| STANDHYD ( 40630)|   Area    (ha)=  20.54
|ID= 1 DT= 5.0 min |   Total Imp(%)=  63.95   Dir. Conn.(%)=  52.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      13.13         7.40
     Dep. Storage     (mm)=       2.00         5.95
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     370.01        42.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        68.32
                   over (min)       5.00        20.00
     Storage Coeff.  (min)=       7.12 (ii)   16.99 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.59         1.35        2.932 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17       10.17
     RUNOFF VOLUME    (mm)=     210.34       188.33      199.92
     TOTAL RAINFALL   (mm)=     212.34       212.34      212.34
     RUNOFF COEFFICIENT   =       0.99         0.89        0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  ( 50640)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40630):    20.54   2.932    10.17   199.92
     + ID2= 2 ( 50630):    90.11  12.421    10.25   200.86
       ==========================================================
       ID = 3 ( 50640):   110.65  15.332    10.17   200.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):     0.75   0.108    10.17   190.10
     + ID2= 2 ( 50640):   110.65  15.332    10.17   200.69
       ==========================================================
       ID = 3 (******):   111.40  15.440    10.17   200.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (******):    11.13   1.483    10.33   190.33
     + ID2= 2 (******):   111.40  15.440    10.17   200.62
       ==========================================================
       ID = 3 (******):   122.53  16.890    10.17   199.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
---------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00        447.10        0.0450
                  42.83        446.80        0.0450
                  42.89        446.80        0.0450
                  43.24        446.79        0.0450
                 122.57        446.48        0.0450
                 154.02        446.22        0.0450
                 191.79        446.32    0.0450 /0.0350  Main Channel
                 199.05        442.27        0.0350      Main Channel
                 199.74        442.33        0.0350      Main Channel
                 212.02        444.19        0.0350      Main Channel
                 232.17        444.54    0.0350 /0.0450  Main Channel
                 348.58        444.42        0.0450
                 359.23        444.30        0.0450
                 381.33        444.03        0.0450
                 483.65        444.18        0.0450
                 548.64        445.87        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.19   442.46    .184E+03        0.1         0.65      24.29
        0.38   442.65    .662E+03        0.7         1.01      15.64
        0.57   442.84    .143E+04        2.0         1.31      12.09
        0.76   443.03    .247E+04        4.1         1.57      10.05
        0.95   443.22    .381E+04        7.3         1.81       8.70
        1.14   443.41    .543E+04       11.7         2.04       7.73
        1.33   443.60    .733E+04       17.5         2.26       6.99
        1.52   443.79    .952E+04       24.8         2.46       6.41
        1.71   443.98    .120E+05       33.7         2.66       5.93
        1.89   444.16    .211E+05       47.0         2.11       7.49
        2.08   444.35    .469E+05       73.0         1.47      10.71
        2.27   444.54    .855E+05      117.6         1.30      12.12
        2.46   444.73    .140E+06      240.0         1.62       9.75
        2.65   444.92    .197E+06      400.4         1.92       8.20
        2.84   445.11    .255E+06      595.0         2.21       7.13
        3.03   445.30    .314E+06      821.8         2.48       6.37
        3.22   445.49    .374E+06     1079.2         2.73       5.78
        3.41   445.68    .436E+06     1366.3         2.96       5.32
        3.60   445.87    .500E+06     1682.3         3.19       4.95

                                          <---- hydrograph ---->   <-pipe / channel->
                                  AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                  (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)  122.53    16.89   10.17 199.68       1.31       2.23
   OUTFLOW: ID= 1 (******)  122.53    16.70   10.25 199.68       1.30       2.22



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| CALIB             |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.19

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

   Unit Hyd Qpeak  (cms)=   0.090

   PEAK FLOW       (cms)=   0.065 (i)
   TIME TO PEAK    (hrs)=  10.167
   RUNOFF VOLUME    (mm)= 189.909
   TOTAL RAINFALL   (mm)= 212.340
   RUNOFF COEFFICIENT   =   0.894

   (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| NASHYD   (******)|   Area     (ha)=   1.05   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

   Unit Hyd Qpeak  (cms)=   0.174

   PEAK FLOW       (cms)=   0.151 (i)
   TIME TO PEAK    (hrs)=  10.167
   RUNOFF VOLUME    (mm)= 190.142
   TOTAL RAINFALL   (mm)= 212.340
   RUNOFF COEFFICIENT   =   0.895

   (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| NASHYD   (******)|   Area     (ha)=   1.10   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
---------------------   U.H. Tp(hrs)=   0.24

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

   Unit Hyd Qpeak  (cms)=   0.175

   PEAK FLOW       (cms)=   0.158 (i)
   TIME TO PEAK    (hrs)=  10.167
   RUNOFF VOLUME    (mm)= 190.174
   TOTAL RAINFALL   (mm)= 212.340
   RUNOFF COEFFICIENT   =   0.896

   (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------------
---------------------
| CALIB             |
| STANDHYD (******)|   Area     (ha)=  17.55
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  41.00
---------------------

                                  IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=       14.39          3.16
   Dep. Storage     (mm)=        2.00          4.13
   Average Slope     (%)=        1.00          2.00
   Length            (m)=       30.00         30.00
   Mannings n           =       0.013         0.025

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

   Max.Eff.Inten.(mm/hr)=      52.83       172.94
            over (min)         5.00         5.00
   Storage Coeff.  (min)=      1.60 (ii)    2.99 (ii)
   Unit Hyd. Tpeak (min)=      5.00         5.00
   Unit Hyd. peak  (cms)=      0.32         0.28
                                                    *TOTALS*
   PEAK FLOW       (cms)=      1.06         1.52      2.574 (iii)
   TIME TO PEAK    (hrs)=      9.67        10.17        10.17
   RUNOFF VOLUME    (mm)=    210.34       205.40       207.43
   TOTAL RAINFALL   (mm)=    212.34       212.34       212.34
   RUNOFF COEFFICIENT   =      0.99         0.97         0.98
```

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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.99
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=   1.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.50         1.50
     Dep. Storage     (mm)=       2.00         4.13
     Average Slope     (%)=       1.00        20.00
     Length            (m)=      15.00        15.00
     Mannings n             =     0.013        0.025

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83       104.24
                   over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.06 (ii)    4.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.24
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.00         0.43        0.437 (iii)
     TIME TO PEAK    (hrs)=       9.50        10.17        10.17
     RUNOFF VOLUME    (mm)=     210.34       201.02       201.11
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.95         0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     1.10   0.158    10.17   190.17
      + ID2= 2 (******):     1.05   0.151    10.17   190.14
        ================================================
        ID = 3 (******):     2.15   0.309    10.17   190.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):     2.15   0.309    10.17   190.16
      + ID2= 2 (******):    17.55   2.574    10.17   207.43
        ================================================
        ID = 1 (******):    19.70   2.883    10.17   205.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    19.70   2.883    10.17   205.54
      + ID2= 2 (******):     2.99   0.437    10.17   201.11
        ================================================
        ID = 3 (******):    22.69   3.320    10.17   204.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    22.69   3.320    10.17   204.96
      + ID2= 2 (******):     0.17   0.083    10.17   205.53
        ================================================
        ID = 1 (******):    22.86   3.403    10.17   204.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    22.86   3.403    10.17   204.96
      + ID2= 2 (******):     0.29   0.159    10.17   207.43
        ================================================
        ID = 3 (******):    23.15   3.563    10.17   204.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(******)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000    0.0000    |    0.3352    3.1110
                          0.0933    0.5687    |    0.3714    3.8158
                          0.1848    1.1636    |    0.4043    4.5492
                          0.2439    1.7854    |    0.4445    5.6626
                          0.2910    2.4344    |    0.0000    0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (******)        23.146     3.563     10.17     204.99
   OUTFLOW: ID= 1 (******)        23.146     0.379     12.25     204.93
   OVERFLOW:ID= 3 (  0003)         0.000     0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.64
                  TIME SHIFT OF PEAK FLOW         (min)=125.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  3.9920

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  --------------------------
  | Junction Command(30651004) |
  --------------------------
                              AREA     QPEAK   TPEAK     R.V.
                              (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3(30651002)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2(30651004)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
*** W A R N I N G :  HYDROGRAPH ****** <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0003 = HYDROGRAPH 0001
        ID1= 1 (******):    23.15   0.379    12.25   204.93
      + ID2= 2 (******):     0.00   0.000     0.00     0.00
        ================================================
        ID = 3 (******):    23.15   0.379    12.25   204.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 3 (******):    23.15   0.379    12.25   204.93
      + ID2= 2 (******):     0.45   0.065    10.17   189.91
        ================================================
        ID = 1 (******):    23.60   0.417    11.17   204.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):    23.60   0.417    11.17   204.64
      + ID2= 2 (******):   122.53  16.699    10.25   199.68
        ================================================
        ID = 3 (******):   146.12  17.096    10.25   200.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area    (ha)=   2.19   Curve Number   (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.27

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.310

     PEAK FLOW       (cms)=   0.312 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 190.240
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (******):     2.19   0.312    10.17   190.24
      + ID2= 2 (******):   146.12  17.096    10.25   200.48
        ================================================
        ID = 3 (******):   148.31  17.404    10.25   200.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00         429.12         0.0450
                  37.54         428.86         0.0450
                  53.31         428.70         0.0450
                  81.17         428.24         0.0450
```

```
                 99.28       428.15    0.0450 /0.0350  Main Channel
                114.53       427.72        0.0350      Main Channel
                119.88       426.51        0.0350      Main Channel
                124.17       425.84        0.0350      Main Channel
                206.01       425.90        0.0350      Main Channel
                209.64       426.51        0.0350      Main Channel
                214.21       426.89        0.0350      Main Channel
                231.49       427.17        0.0350      Main Channel
                268.61       427.89    0.0350 /0.0450  Main Channel
                351.58       428.15        0.0450
                368.27       428.31        0.0450
                405.75       428.52        0.0450
                416.79       428.59        0.0450
                440.06       428.76        0.0450
                469.88       428.97        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.16   426.00    .218E+04       4.1         0.39       8.87
        0.31   426.16    .495E+04      15.8         0.67       5.22
        0.47   426.32    .779E+04      33.2         0.89       3.92
        0.63   426.47    .107E+05      55.4         1.08       3.22
        0.79   426.63    .137E+05      81.8         1.25       2.78
        0.94   426.79    .167E+05     112.4         1.40       2.48
        1.10   426.95    .199E+05     144.6         1.52       2.29
        1.26   427.10    .233E+05     176.4         1.58       2.20
        1.42   427.26    .271E+05     214.5         1.65       2.11
        1.57   427.42    .312E+05     258.4         1.73       2.01
        1.73   427.58    .356E+05     307.7         1.81       1.93
        1.89   427.73    .402E+05     362.0         1.88       1.85
        2.05   427.89    .452E+05     415.1         1.91       1.82
        2.23   428.07    .525E+05     501.3         1.99       1.74
        2.41   428.25    .621E+05     609.1         2.05       1.70
        2.59   428.43    .733E+05     739.1         2.10       1.65
        2.77   428.61    .862E+05     886.8         2.15       1.62
        2.95   428.79    .101E+06    1053.9         2.19       1.59
        3.13   428.97    .116E+06    1240.2         2.22       1.57

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   148.31    17.40   10.25 200.33      0.33      0.68
   OUTFLOW: ID= 1 (******)   148.31    17.31   10.33 200.33      0.33      0.68


--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):   148.31  17.314    10.33   200.33
      + ID2= 2 (******):    26.16   1.962    10.33   194.97
        ================================================
        ID = 3 (******):   174.48  19.276    10.33   199.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.22   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.053

     PEAK FLOW       (cms)=   0.032 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.492
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.892

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.22   0.032    10.17   189.49
      + ID2= 2 (******):    27.10   5.041    10.25   196.63
        ================================================
        ID = 3 (******):    27.32   5.071    10.25   196.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         433.07        0.0450
                  59.66         432.39        0.0450
                  94.25         432.03        0.0450
                 115.71         431.82        0.0450
                 143.84         431.84    0.0450 /0.0350  Main Channel
                 163.59         431.75        0.0350      Main Channel
                 177.84         431.73        0.0350      Main Channel
                 199.51         431.70        0.0350      Main Channel
                 231.74         431.53        0.0350      Main Channel
                 283.71         431.44        0.0350      Main Channel
                 294.09         431.43        0.0350      Main Channel
                 325.65         431.42        0.0350      Main Channel
                 355.24         431.24        0.0350      Main Channel
                 383.70         431.43        0.0350      Main Channel
                 476.17         432.06    0.0350 /0.0450  Main Channel
                 510.88         432.23        0.0450
                 558.61         432.37        0.0450
                 589.84         432.57        0.0450
                 622.97         432.73        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.08   431.32    .108E+03       0.3         0.30       6.68
        0.15   431.39    .434E+03       1.7         0.47       4.21
        0.23   431.47    .119E+04       5.0         0.50       3.99
        0.30   431.54    .252E+04      13.9         0.66       3.02
        0.38   431.62    .417E+04      29.3         0.84       2.37
        0.45   431.69    .604E+04      50.1         0.99       2.01
        0.53   431.77    .828E+04      73.9         1.06       1.87
        0.60   431.84    .109E+05     108.8         1.19       1.67
        0.68   431.92    .142E+05     159.5         1.34       1.48
        0.76   432.01    .176E+05     219.4         1.48       1.34
        0.84   432.09    .213E+05     290.0         1.62       1.22
        0.92   432.17    .252E+05     374.6         1.77       1.12
        1.01   432.25    .293E+05     469.2         1.91       1.04
        1.09   432.33    .338E+05     573.9         2.02       0.98
        1.17   432.41    .386E+05     689.9         2.13       0.93
        1.25   432.49    .435E+05     817.2         2.24       0.89
        1.33   432.57    .487E+05     955.3         2.34       0.85
        1.41   432.65    .541E+05    1103.5         2.43       0.82
        1.49   432.73    .597E+05    1262.7         2.52       0.79

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)   27.32     5.07   10.25 196.57      0.23      0.50
   OUTFLOW: ID= 1 (******)   27.32     5.04   10.25 196.57      0.23      0.50


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   3.87   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.33

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.448

     PEAK FLOW       (cms)=   0.539 (i)
     TIME TO PEAK    (hrs)=  10.250
     RUNOFF VOLUME    (mm)= 190.301
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.45   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.107

     PEAK FLOW       (cms)=   0.065 (i)
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```
      TIME TO PEAK     (hrs)=  10.167
      RUNOFF VOLUME     (mm)= 189.493
      TOTAL RAINFALL    (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.892

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     3.87   0.539    10.25   190.30
      + ID2= 2 (******):     0.45   0.065    10.17   189.49
        ================================================
        ID = 3 (******):     4.32   0.603    10.17   190.22

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):     4.32   0.603    10.17   190.22
      + ID2= 2 (******):    27.32   5.036    10.25   196.57
        ================================================
        ID = 1 (******):    31.64   5.636    10.25   195.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        430.79        0.0450
                   23.82        429.79    0.0450 /0.0350  Main Channel
                   44.05        429.11        0.0350      Main Channel
                   70.46        428.15        0.0350      Main Channel
                  112.31        427.60        0.0350      Main Channel
                  150.77        427.27        0.0350      Main Channel
                  179.17        427.15        0.0350      Main Channel
                  214.90        427.16        0.0350      Main Channel
                  261.89        427.25        0.0350      Main Channel
                  317.65        427.56        0.0350      Main Channel
                  382.75        427.99        0.0350      Main Channel
                  394.40        428.11        0.0350      Main Channel
                  432.80        428.07        0.0350      Main Channel
                  432.91        428.07        0.0350      Main Channel
                  462.57        428.15        0.0350      Main Channel
                  522.90        429.79    0.0350 /0.0450  Main Channel
                  585.04        429.90        0.0450
                  731.92        430.62        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
       0.18    427.33    .207E+04      11.5         0.73       2.99
       0.35    427.50    .570E+04      49.9         1.15       1.91
       0.53    427.68    .105E+05     119.2         1.49       1.47
       0.70    427.85    .163E+05     221.8         1.79       1.22
       0.88    428.03    .229E+05     360.8         2.06       1.06
       1.06    428.21    .312E+05     509.7         2.14       1.02
       1.23    428.38    .405E+05     771.0         2.49       0.88
       1.41    428.56    .500E+05    1076.3         2.82       0.77
       1.58    428.73    .598E+05    1423.8         3.12       0.70
       1.76    428.91    .699E+05    1812.5         3.40       0.64
       1.94    429.09    .802E+05    2241.5         3.66       0.60
       2.11    429.26    .907E+05    2709.1         3.91       0.56
       2.29    429.44    .102E+06    3215.8         4.15       0.53
       2.46    429.61    .113E+06    3761.6         4.38       0.50
       2.64    429.79    .124E+06    4346.4         4.59       0.48
       2.85    430.00    .139E+06    5173.9         4.88       0.45
       3.06    430.20    .156E+06    6075.9         5.12       0.43
       3.26    430.41    .173E+06    7054.9         5.33       0.41
       3.47    430.62    .193E+06    8114.3         5.52       0.40

                                    <---- hydrograph ---->   <-pipe / channel->
                               AREA    QPEAK    TPEAK    R.V.   MAX DEPTH  MAX VEL
                               (ha)    (cms)    (hrs)    (mm)       (m)      (m/s)
   INFLOW : ID= 2 (******)    31.64     5.64   10.25 195.70       0.09      0.73
   OUTFLOW: ID= 1 (******)    31.64     5.62   10.33 195.70       0.09      0.73


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.97   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.083   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Unit Hyd Qpeak  (cms)=   0.161

      PEAK FLOW       (cms)=   0.140 (i)
      TIME TO PEAK    (hrs)=  10.167
      RUNOFF VOLUME    (mm)= 190.142
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.895

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.69   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Unit Hyd Qpeak  (cms)=   0.146

      PEAK FLOW       (cms)=   0.100 (i)
      TIME TO PEAK    (hrs)=  10.167
      RUNOFF VOLUME    (mm)= 189.806
      TOTAL RAINFALL   (mm)= 212.340
      RUNOFF COEFFICIENT   =   0.894

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.69   0.100    10.17   189.81
      + ID2= 2 (******):     0.97   0.140    10.17   190.14
        ================================================
        ID = 3 (******):     1.66   0.239    10.17   190.00

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     1.66   0.239    10.17   190.00
      + ID2= 2 (******):    31.64   5.616    10.33   195.70
        ================================================
        ID = 3 (******):    33.30   5.834    10.33   195.42

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
        (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
         0.00     0.00     0.00     0.00     0.00     0.00
         1.00     0.00     0.00     0.00     0.00     1.00
       100.00     0.00     0.00     0.00     0.00   100.00

                                 AREA     QPEAK     TPEAK     R.V.
                                 (ha)     (cms)     (hrs)     (mm)
      TOTAL HYD.(ID= 1):      33.30      5.83     10.33  195.42
      ================================================
      ID= 2  (   2)    :     33.30      5.83     10.33  195.42
      ID= 3  (   2)    :      0.00      0.00     10.33  195.42
      ID= 4  (   2)    :      0.00      0.00      0.00    0.00
      ID= 5  (   2)    :      0.00      0.00      0.00    0.00
      ID= 6  (   2)    :      0.00      0.00      0.00    0.00
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| CALIB            |
| STANDHYD (******)|   Area     (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
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                                IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=        0.96          0.25
      Dep. Storage     (mm)=        2.00          4.48
      Average Slope     (%)=        0.64          0.54
      Length            (m)=       63.89        157.20
      Mannings n           =       0.013         0.030

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
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                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                  over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.88 (ii)   11.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.04          0.177 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       190.35         206.14
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.90           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (******)|   Area    (ha)=   2.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.32         0.58
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.70         0.60
     Length            (m)=     166.18       124.91
     Mannings n           =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                  over (min)       5.00        10.00
     Storage Coeff.  (min)=       4.98 (ii)    9.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.22         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.34         0.08          0.424 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       190.35         206.34
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.90           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     2.90   0.424    10.17   206.34
      + ID2= 2 (******):     1.21   0.177    10.17   206.14
        ================================================
        ID = 3 (******):     4.11   0.601    10.17   206.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.85     0.00     0.00     0.00     0.00     0.85
        0.85     1.00     0.00     0.00     0.00     1.85
        0.85   100.00     0.00     0.00     0.00   100.85

                           AREA     QPEAK     TPEAK     R.V.
                           (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):    4.11      0.60     10.17   206.28
     ================================================
     ID= 2  (   2)    :    4.11      0.60     10.17   206.28
     ID= 3  (   2)    :    0.00      0.00     10.17   206.28
     ID= 4  (   2)    :    0.00      0.00      0.00     0.00
     ID= 5  (   2)    :    0.00      0.00      0.00     0.00
     ID= 6  (   2)    :    0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000    10.33   195.42
      + ID2= 2 (******):     4.11   0.601    10.17   206.28
        ================================================
        ID = 3 (******):     4.11   0.601    10.17   206.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     5.20     0.00     0.00     0.00     6.20
      100.00     5.20     0.00     0.00     0.00   105.20

                           AREA     QPEAK     TPEAK     R.V.
                           (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):    4.11      0.60     10.17   206.28
     ================================================
     ID= 2  (   2)    :    0.00      0.00     10.17   206.28
     ID= 3  (   2)    :    4.11      0.60     10.17   206.28
     ID= 4  (   2)    :    0.00      0.00      0.00     0.00
     ID= 5  (   2)    :    0.00      0.00      0.00     0.00
     ID= 6  (   2)    :    0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    33.30   5.834    10.33   195.42
      + ID2= 2 (******):     0.00   0.000    10.17   206.28
        ================================================
        ID = 3 (******):    33.30   5.834    10.33   195.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        1.00     0.00     0.00     0.00     0.00     1.00
      100.00     0.00     0.00     0.00     0.00   100.00

                           AREA     QPEAK     TPEAK     R.V.
                           (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   33.30      5.83     10.33   195.42
     ================================================
     ID= 2  (   2)    :   33.30      5.83     10.33   195.42
     ID= 3  (   2)    :    0.00      0.00     10.33   195.42
     ID= 4  (   2)    :    0.00      0.00      0.00     0.00
     ID= 5  (   2)    :    0.00      0.00      0.00     0.00
     ID= 6  (   2)    :    0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
     Outflow / Inflow  Relationships

      Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.01     0.00     0.00     0.00     0.00     0.01
        0.06     0.00     0.00     0.00     0.00     0.06
        0.08     0.00     0.00     0.00     0.00     0.08
        0.12     0.00     0.00     0.00     0.00     0.12
        0.20     0.00     0.00     0.00     0.00     0.20
        0.25     0.00     0.00     0.00     0.00     0.25
        0.30     0.00     0.00     0.00     0.00     0.30
        0.33     0.00     0.00     0.00     0.00     0.33
        0.37     0.00     0.00     0.00     0.00     0.37
        0.39     0.00     0.00     0.00     0.00     0.39
        0.42     1.43     0.00     0.00     0.00     1.85
        0.44     8.83     0.00     0.00     0.00     9.27
        0.47    25.03     0.00     0.00     0.00    25.50
        0.49    52.11     0.00     0.00     0.00    52.61
        0.52    91.81     0.00     0.00     0.00    92.33
        0.53   126.04     0.00     0.00     0.00   126.57

                           AREA     QPEAK     TPEAK     R.V.
                           (ha)     (cms)     (hrs)     (mm)
     TOTAL HYD.(ID= 1):   33.30      5.83     10.33   195.42
     ================================================
     ID= 2  (   2)    :    6.91      0.43     10.33   195.42
     ID= 3  (   2)    :   26.39      5.40     10.33   195.42
     ID= 4  (   2)    :    0.00      0.00      0.00     0.00
     ID= 5  (   2)    :    0.00      0.00      0.00     0.00
     ID= 6  (   2)    :    0.00      0.00      0.00     0.00
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   0.82
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.81         0.01
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       0.50         1.00
     Length            (m)=      18.40         0.10
     Mannings n           =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                  over (min)       5.00         5.00
     Storage Coeff.  (min)=       1.47 (ii)    1.48 (ii)
```

```
      Unit Hyd. Tpeak (min)=       5.00         5.00
      Unit Hyd. peak  (cms)=       0.33         0.33
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.12         0.00          0.120 (iii)
      TIME TO PEAK    (hrs)=       9.67        10.17           10.17
      RUNOFF VOLUME    (mm)=     210.34       190.35          210.14
      TOTAL RAINFALL   (mm)=     212.34       212.34          212.34
      RUNOFF COEFFICIENT   =       0.99         0.90            0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  93.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.82    0.120    10.17   210.14
      + ID2= 2 (******):     0.00    0.000    10.33   195.42
        ================================================
        ID = 3 (******):     0.82    0.120    10.17   210.14

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 3 (******):     0.82    0.120    10.17   210.14
      + ID2= 2 (******):    26.39    5.402    10.33   195.42
        ================================================
        ID = 1 (******):    27.21    5.488    10.33   195.86

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| DIVERTHYD(******)|
| IN= 1   # OUT= 5 |
--------------------
      Outflow / Inflow  Relationships

       Flow 1 + Flow 2 + Flow 3 + Flow 4 + Flow 5 = Total
       (cms)    (cms)    (cms)    (cms)    (cms)    (cms)
        0.00     0.00     0.00     0.00     0.00     0.00
        0.00     0.00     0.00     0.00     0.00     0.00
        0.03     0.00     0.00     0.00     0.00     0.03
        0.04     0.00     0.00     0.00     0.00     0.04
        0.09     0.00     0.00     0.00     0.00     0.09
        0.12     0.00     0.00     0.00     0.00     0.13
        0.20     0.00     0.00     0.00     0.00     0.20
        0.30     0.00     0.00     0.00     0.00     0.30
        0.37     0.00     0.00     0.00     0.00     0.37
        0.43     0.00     0.00     0.00     0.00     0.43
        0.48     0.00     0.00     0.00     0.00     0.48
        0.52     0.00     0.00     0.00     0.00     0.52
        0.57     0.00     0.00     0.00     0.00     0.57
        0.67     0.00     0.00     0.00     0.00     0.67
        0.68     0.00     0.00     0.00     0.00     0.68
        0.68     0.02     0.00     0.00     0.00     0.70
        0.72     0.56     0.00     0.00     0.00     1.28
        0.73     0.75     0.01     0.00     0.00     1.48
        1.10     1.87     0.54     0.00     0.00     3.51
        1.40     2.25     2.61     0.00     0.00     6.26

                              AREA     QPEAK     TPEAK    R.V.
                              (ha)     (cms)     (hrs)    (mm)
      TOTAL HYD.(ID= 1):    27.21      5.49     10.33  195.86
      ================================================
      ID= 2  (   3)    :    11.84      1.32     10.33  195.86
      ID= 3  (   3)    :    10.29      2.14     10.33  195.86
      ID= 4  (   3)    :     5.09      2.03     10.33  195.86
      ID= 5  (   3)    :     0.00      0.00      0.00    0.00
      ID= 6  (   3)    :     0.00      0.00      0.00    0.00
--------------------------------------------------------------------------------
--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 1 (******):     6.91    0.432    10.33   195.42
      + ID2= 2 (******):    11.84    1.316    10.33   195.86
        ================================================
        ID = 3 (******):    18.74    1.748    10.33   195.70

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   8.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  58.00   Dir. Conn.(%)=  58.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       4.98         3.60
      Dep. Storage     (mm)=       2.00         4.48
      Average Slope     (%)=       0.91         1.12
      Length            (m)=     246.54       157.18
      Mannings n          =      0.015        0.300

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

Max.Eff.Inten.(mm/hr)=      52.83        52.10
              over (min)        5.00        35.00
Storage Coeff.  (min)=       6.35 (ii)    33.99 (ii)
Unit Hyd. Tpeak (min)=       5.00         35.00
```

```
      Unit Hyd. peak  (cms)=       0.19         0.03
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.73         0.44          1.134 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.50          10.17
      RUNOFF VOLUME    (mm)=     210.34       190.35         201.94
      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
      RUNOFF COEFFICIENT   =       0.99         0.90           0.95

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  93.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50650)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 1 (******):     8.58    1.134    10.17   201.94
      + ID2= 2 (******):   174.48   19.276    10.33   199.53
        ================================================
        ID = 3 ( 50650):   183.06   20.271    10.33   199.64

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50650)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)     (cms)    (hrs)     (mm)
        ID1= 3 ( 50650):   183.06   20.271    10.33   199.64
      + ID2= 2 (******):    18.74    1.748    10.33   195.70
        ================================================
        ID = 1 ( 50650):   201.80   22.018    10.33   199.27

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60650)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00        129.45        0.0450
                    6.00        129.24        0.0450
                    8.00        128.92        0.0450
                   10.00        128.26        0.0450
                   12.00        127.37        0.0450
                   14.00        126.79        0.0450
                   16.00        126.20        0.0450
                   18.00        125.80        0.0450
                   21.00        125.29        0.0450
                   24.00        124.85        0.0450
                   27.00        124.54        0.0350      Main Channel
                   30.00        124.62        0.0350      Main Channel
                   33.00        124.84    0.0350 /0.0450  Main Channel
                   36.00        125.26        0.0450
                   39.00        125.86        0.0450
                   42.00        126.49        0.0450
                   48.00        128.97        0.0450
                   54.00        129.42        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)      (cu.m.)     (cms)       (m/s)      (min)
       0.26   124.80    .401E+03       0.4          0.30      18.82
       0.51   125.06    .127E+04       1.9          0.51      11.03
       0.77   125.31    .246E+04       4.8          0.66       8.52
       1.03   125.57    .390E+04       9.1          0.78       7.15
       1.28   125.83    .559E+04      14.9          0.89       6.28
       1.54   126.08    .751E+04      22.2          0.99       5.64
       1.80   126.34    .963E+04      31.2          1.09       5.15
       2.05   126.60    .119E+05      42.0          1.18       4.73
       2.31   126.85    .144E+05      54.6          1.27       4.39
       2.57   127.11    .169E+05      68.8          1.36       4.10
       2.82   127.37    .196E+05      84.6          1.44       3.87
       3.08   127.62    .225E+05     102.4          1.53       3.65
       3.34   127.88    .254E+05     121.9          1.61       3.47
       3.59   128.14    .284E+05     142.9          1.69       3.31
       3.85   128.40    .315E+05     165.4          1.76       3.18
       4.11   128.65    .348E+05     189.3          1.82       3.06
       4.36   128.91    .381E+05     215.0          1.89       2.96
       4.62   129.17    .417E+05     235.7          1.89       2.95
       4.88   129.42    .459E+05     248.7          1.82       3.07

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)       (m/s)
   INFLOW : ID= 2 ( 50650)  201.80    22.02   10.33 199.27      1.53      0.99
   OUTFLOW: ID= 1 ( 60650)  201.80    21.84   10.42 199.27      1.52      0.98

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--------------------
| CALIB            |
| STANDHYD ( 40670)|   Area    (ha)=  50.76
|ID= 1 DT= 5.0 min |   Total Imp(%)=  73.00   Dir. Conn.(%)=  72.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      37.06        13.71
      Dep. Storage     (mm)=       2.00         6.10
      Average Slope     (%)=       1.50         1.50
      Length            (m)=     581.73        82.00
      Mannings n          =      0.015        0.280

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
```

```
      Max.Eff.Inten.(mm/hr)=      52.83        53.45
                   over (min)      10.00        30.00
      Storage Coeff.  (min)=       9.15 (ii)   25.43 (ii)
      Unit Hyd. Tpeak (min)=      10.00        30.00
      Unit Hyd. peak  (cms)=       0.12         0.04
                                                        *TOTALS*
      PEAK FLOW       (cms)=       5.36         1.81        7.108 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.33        10.17
      RUNOFF VOLUME    (mm)=     210.34       182.41       202.52
      TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
      RUNOFF COEFFICIENT   =       0.99         0.86         0.95

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50670)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40670):    50.76   7.108    10.17   202.52
      + ID2= 2 ( 60650):   201.80  21.839    10.42   199.27
        ====================================================
        ID = 3 ( 50670):   252.56  28.451    10.25   199.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60670)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         115.77        0.0450
                  20.00         115.51        0.0450
                  24.00         114.73        0.0450
                  28.00         113.17    0.0450 /0.0350  Main Channel
                  32.00         113.16    0.0350 /0.0450  Main Channel
                  36.00         114.68        0.0450
                  40.00         115.05        0.0450
                  44.00         115.27        0.0450
                  48.00         115.46        0.0450
                  52.00         115.71        0.0450
                  54.00         115.77        0.0450

      <---------------------- TRAVEL TIME TABLE ----------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)       (m/s)      (min)
       0.14   113.30    .439E+03       0.4         0.65       19.93
       0.27   113.43    .975E+03       1.3         1.01       12.84
       0.41   113.57    .159E+04       2.6         1.28       10.09
       0.55   113.71    .228E+04       4.4         1.51        8.57
       0.69   113.84    .304E+04       6.7         1.70        7.59
       0.82   113.98    .388E+04       9.4         1.88        6.89
       0.96   114.12    .480E+04      12.6         2.03        6.36
       1.10   114.26    .579E+04      16.2         2.18        5.94
       1.24   114.39    .686E+04      20.4         2.31        5.60
       1.37   114.53    .800E+04      25.1         2.43        5.32
       1.51   114.67    .922E+04      30.3         2.55        5.08
       1.65   114.81    .106E+05      35.3         2.59        5.00
       1.78   114.94    .122E+05      41.1         2.62        4.93
       1.92   115.08    .140E+05      47.8         2.65        4.87
       2.06   115.22    .161E+05      55.3         2.66        4.86
       2.20   115.35    .186E+05      64.0         2.67        4.84
       2.33   115.49    .214E+05      74.1         2.68        4.82
       2.47   115.63    .250E+05      80.6         2.50        5.17
       2.61   115.77    .300E+05      92.4         2.39        5.41

                                  <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50670)  252.56    28.45   10.25 199.93      1.46      2.51
   OUTFLOW: ID= 1 ( 60670)  252.56    28.28   10.33 199.93      1.45      2.50


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| CALIB            |
| STANDHYD ( 40700)|   Area    (ha)=  10.86
|ID= 1 DT= 5.0 min |   Total Imp(%)=  57.32   Dir. Conn.(%)=  55.11
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       6.22         4.63
     Dep. Storage     (mm)=       2.00         8.04
     Average Slope     (%)=       2.30         2.30
     Length            (m)=     269.03        47.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.49
                  over (min)      5.00        20.00
     Storage Coeff.  (min)=       5.07 (ii)   16.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.21         0.06
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.88         0.67        1.551 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17        10.17
     RUNOFF VOLUME    (mm)=     210.34       183.31       198.20
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.86         0.93

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  91.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50680)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40700):    10.86    1.551    10.17   198.20
      + ID2= 2 ( 60670):   252.56   28.280    10.33   199.93
        ====================================================
        ID = 3 ( 50680):   263.42   29.601    10.33   199.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40680)|   Area    (ha)=   1.20
|ID= 1 DT= 5.0 min |   Total Imp(%)=  41.95   Dir. Conn.(%)=  38.92
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50         0.69
     Dep. Storage     (mm)=       2.00         7.98
     Average Slope     (%)=       0.60         0.60
     Length            (m)=      89.27        69.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.20
                  over (min)      5.00        30.00
     Storage Coeff.  (min)=       3.91 (ii)   25.88 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.25         0.04
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.09        0.158 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.33        10.17
     RUNOFF VOLUME    (mm)=     210.34       181.04       192.43
     TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
     RUNOFF COEFFICIENT   =       0.99         0.85         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40690)|   Area    (ha)=  25.49
|ID= 1 DT= 5.0 min |   Total Imp(%)=  31.11   Dir. Conn.(%)=  27.50
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       7.93        17.56
     Dep. Storage     (mm)=       2.00         8.01
     Average Slope     (%)=       3.10         3.10
     Length            (m)=     412.26        40.00
     Mannings n           =      0.015        0.350

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
     0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
     0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
     0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
     0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
     0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
     0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
     0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
     0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
     0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
     0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
     1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
     1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
     1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
     1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
     1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
     1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
     1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
     1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
     1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
     1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
     1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
     1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
     2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
     2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
     2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
     2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
     2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
     2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
     2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
     2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
     2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
     2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
     2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
     2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
     3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
     3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.06
                  over (min)      5.00        20.00
     Storage Coeff.  (min)=       5.99 (ii)   15.67 (ii)
```

```
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.19         0.07
                                                          *TOTALS*
      PEAK FLOW       (cms)=       1.03         2.54         3.570 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17        10.17
      RUNOFF VOLUME    (mm)=     210.34       178.69       187.40
      TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
      RUNOFF COEFFICIENT   =       0.99         0.84         0.88


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50690)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40680):     1.20    0.158    10.17   192.43
      + ID2= 2 ( 40690):    25.49    3.570    10.17   187.40
        ====================================================
        ID = 3 ( 50690):    26.69    3.728    10.17   187.62

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50700)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50680):   263.42   29.601    10.33   199.86
      + ID2= 2 ( 50690):    26.69    3.728    10.17   187.62
        ====================================================
        ID = 3 ( 50700):   290.11   33.082    10.25   198.73

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60700)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         109.54        0.0450
                    4.00         108.85        0.0450
                    8.00         108.76        0.0450
                   12.00         108.31        0.0450
                   16.00         107.44        0.0450
                   20.00         107.22        0.0450
                   24.00         107.06        0.0450
                   28.00         107.10        0.0450
                   32.00         107.04        0.0450
                   36.00         106.98        0.0450
                   40.00         106.83        0.0350      Main Channel
                   44.00         106.49        0.0350      Main Channel
                   48.00         106.92    0.0350 /0.0450  Main Channel
                   52.00         107.19        0.0450
                   56.00         107.11        0.0450
                   60.00         107.14        0.0450
                   64.00         107.27        0.0450
                   68.00         107.71        0.0450
                   72.00         108.37        0.0450
                   80.00         109.55        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH     ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)       (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12    106.60    .128E+03        0.1         0.43      35.47
        0.23    106.72    .513E+03        0.4         0.69      22.34
        0.35    106.83    .115E+04        1.1         0.90      17.05
        0.52    107.00    .277E+04        3.6         1.21      12.69
        0.69    107.17    .675E+04        8.9         1.21      12.64
        0.86    107.34    .135E+05       19.9         1.35      11.35
        1.02    107.51    .211E+05       36.3         1.58       9.70
        1.19    107.68    .291E+05       57.8         1.82       8.39
        1.36    107.85    .375E+05       84.0         2.06       7.43
        1.53    108.02    .461E+05      114.5         2.28       6.71
        1.70    108.19    .550E+05      149.1         2.49       6.15
        1.87    108.35    .642E+05      187.4         2.68       5.71
        2.04    108.52    .737E+05      228.8         2.85       5.37
        2.21    108.69    .837E+05      274.1         3.01       5.09
        2.37    108.86    .942E+05      316.2         3.08       4.97
        2.54    109.03    .105E+06      372.6         3.25       4.72
        2.71    109.20    .117E+06      433.4         3.40       4.50
        2.88    109.37    .129E+06      498.6         3.55       4.31
        3.05    109.54    .141E+06      568.2         3.70       4.14

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50700)  290.11    33.08    10.25 198.73      0.99      1.53
   OUTFLOW: ID= 1 ( 60700)  290.11    32.57    10.42 198.73      0.98      1.52


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--------------------
| CALIB            |
| STANDHYD ( 40710)|   Area    (ha)=   6.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  24.65   Dir. Conn.(%)=  20.75
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       1.57         4.79
      Dep. Storage     (mm)=       2.00         8.94
      Average Slope     (%)=       3.90         3.90
      Length            (m)=     205.82        41.00
      Mannings n           =      0.015        0.360

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

 Max.Eff.Inten.(mm/hr)=      52.83        54.27
              over (min)        5.00        15.00
 Storage Coeff.  (min)=       3.68 (ii)   13.00 (ii)
 Unit Hyd. Tpeak (min)=       5.00        15.00
 Unit Hyd. peak  (cms)=       0.25         0.08
                                                  *TOTALS*
 PEAK FLOW       (cms)=       0.19         0.71         0.904 (iii)
 TIME TO PEAK    (hrs)=      10.17        10.17        10.17
 RUNOFF VOLUME    (mm)=     210.34       180.13       186.40
 TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
 RUNOFF COEFFICIENT   =       0.99         0.85         0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50710)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40710):     6.35    0.904    10.17   186.40
      + ID2= 2 ( 60700):   290.11   32.572    10.42   198.73
        ====================================================
        ID = 3 ( 50710):   296.46   33.331    10.42   198.47

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 40720)|   Area    (ha)=  25.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.35   Dir. Conn.(%)=  83.66
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      21.12         3.92
      Dep. Storage     (mm)=       2.00         5.64
      Average Slope     (%)=       3.00         3.00
      Length            (m)=     408.55        40.00
      Mannings n           =      0.015        0.270

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

 Max.Eff.Inten.(mm/hr)=      52.83        53.90
              over (min)        5.00        15.00
 Storage Coeff.  (min)=       6.01 (ii)   10.33 (ii)
 Unit Hyd. Tpeak (min)=       5.00        15.00
 Unit Hyd. peak  (cms)=       0.19         0.09
                                                  *TOTALS*
 PEAK FLOW       (cms)=       3.07         0.58         3.656 (iii)
 TIME TO PEAK    (hrs)=      10.17        10.17        10.17
 RUNOFF VOLUME    (mm)=     210.34       183.03       205.88
 TOTAL RAINFALL   (mm)=     212.34       212.34       212.34
 RUNOFF COEFFICIENT   =       0.99         0.86         0.97


        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  90.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 40730)|   Area    (ha)=  14.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  76.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      10.76         3.40
      Dep. Storage     (mm)=       2.00         6.50
      Average Slope     (%)=       3.10         3.10
      Length            (m)=     307.19        41.00
      Mannings n           =      0.015        0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
```

	2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
	2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
	2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
	2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
	2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
	2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
	2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
	2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
	2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
	2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
	2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
	2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
	3.000	6.35	6.083	13.97	9.167	12.70		
	3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	53.76	
over (min)	5.00	15.00	
Storage Coeff. (min)=	5.02 (ii)	13.82 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.21	0.08	
			TOTALS
PEAK FLOW (cms)=	1.56	0.50	2.055 (iii)
TIME TO PEAK (hrs)=	10.17	10.17	10.17
RUNOFF VOLUME (mm)=	210.34	182.15	203.29
TOTAL RAINFALL (mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT =	0.99	0.86	0.96

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50730)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (40720):		25.04	3.656	10.17	205.88
+ ID2= 2 (40730):		14.15	2.055	10.17	203.29
ID = 3 (50730):		39.19	5.711	10.17	204.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (50730)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (50730):		39.19	5.711	10.17	204.94
+ ID2= 2 (50710):		296.46	33.331	10.42	198.47
ID = 1 (50730):		335.65	37.741	10.33	199.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60730)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	96.28	0.0450	
9.00	95.39	0.0450	
12.00	94.87	0.0450	
15.00	94.17	0.0450	
18.00	93.95	0.0450	
21.00	94.01	0.0450	
24.00	93.92	0.0450	
27.00	93.98	0.0450 /0.0350	Main Channel
30.00	93.33	0.0350	Main Channel
32.00	93.73	0.0350 /0.0450	Main Channel
34.00	94.58	0.0450	
35.00	95.06	0.0450	
40.00	95.32	0.0450	
45.00	96.12	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	93.46	.164E+03	0.0	0.36	89.51
0.26	93.60	.654E+03	0.2	0.57	56.39
0.40	93.73	.147E+04	0.6	0.75	43.03
0.55	93.88	.274E+04	1.4	0.99	32.63
0.70	94.03	.550E+04	2.8	1.00	32.28
0.85	94.18	.104E+05	5.8	1.08	29.94
1.00	94.33	.159E+05	10.1	1.24	26.04
1.15	94.48	.216E+05	15.6	1.41	22.97
1.29	94.63	.275E+05	22.2	1.57	20.64
1.44	94.78	.338E+05	29.9	1.72	18.84
1.59	94.93	.404E+05	38.6	1.86	17.44
1.74	95.08	.473E+05	48.0	1.97	16.40
1.89	95.23	.549E+05	58.1	2.05	15.76
2.04	95.38	.637E+05	70.1	2.14	15.14
2.19	95.53	.731E+05	83.0	2.21	14.67
2.34	95.68	.833E+05	97.5	2.27	14.23
2.49	95.83	.941E+05	113.5	2.34	13.82
2.64	95.98	.106E+06	131.2	2.41	13.42
2.79	96.13	.118E+06	150.7	2.48	13.05

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50730)	335.65	37.74	10.33	199.22	1.58	1.84
OUTFLOW: ID= 1 (60730)	335.65	36.36	10.67	199.22	1.55	1.81

CALIB	
STANDHYD (40770)|	Area (ha)= 69.43
ID= 1 DT= 5.0 min		Total Imp(%)= 81.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	56.24	13.19
Dep. Storage	(mm)=	2.00	5.50
Average Slope	(%)=	1.70	1.70
Length	(m)=	680.34	43.00
Mannings n	=	0.015	0.270

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	54.33	
over (min)	10.00	25.00	
Storage Coeff. (min)=	9.68 (ii)	20.03 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.11	0.05	
			TOTALS
PEAK FLOW (cms)=	8.13	1.85	9.971 (iii)
TIME TO PEAK (hrs)=	10.17	10.25	10.17
RUNOFF VOLUME (mm)=	210.34	183.38	204.95
TOTAL RAINFALL (mm)=	212.34	212.34	212.34
RUNOFF COEFFICIENT =	0.99	0.86	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (50770)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (40770):		69.43	9.971	10.17	204.95
+ ID2= 2 (60730):		335.65	36.358	10.67	199.22
ID = 3 (50770):		405.08	44.111	10.58	200.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(60770)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	92.38	0.0450	
3.00	90.34	0.0450	
6.00	89.94	0.0450	
9.00	89.83	0.0450	
12.00	89.80	0.0450	
15.00	89.72	0.0450	
18.00	89.58	0.0450 /0.0350	Main Channel
21.00	89.15	0.0350	Main Channel
24.00	89.82	0.0350 /0.0450	Main Channel
27.00	89.76	0.0450	
30.00	89.78	0.0450	
33.00	89.79	0.0450	
36.00	89.80	0.0450	
39.00	89.72	0.0450	
42.00	90.35	0.0450	
45.00	91.36	0.0450	
48.00	92.10	0.0450	
51.00	92.21	0.0450	
54.00	92.34	0.0450	
56.00	92.35	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.15	89.29	.298E+02	0.0	0.31	13.27
0.29	89.44	.119E+03	0.2	0.50	8.36
0.44	89.58	.268E+03	0.7	0.65	6.38
0.61	89.76	.588E+03	1.9	0.79	5.25
0.78	89.93	.179E+04	5.1	0.71	5.86
0.96	90.10	.329E+04	11.4	0.87	4.79
1.13	90.27	.489E+04	20.2	1.03	4.03
1.30	90.45	.656E+04	31.5	1.19	3.47
1.47	90.62	.828E+04	45.0	1.35	3.06
1.65	90.79	.100E+05	60.5	1.50	2.76
1.82	90.97	.118E+05	77.9	1.64	2.53
1.99	91.14	.136E+05	97.1	1.77	2.34
2.17	91.31	.155E+05	118.1	1.90	2.18
2.34	91.48	.173E+05	140.6	2.02	2.06
2.51	91.66	.193E+05	164.7	2.13	1.95
2.68	91.83	.212E+05	190.5	2.23	1.86
2.86	92.00	.232E+05	218.0	2.33	1.78
3.03	92.18	.253E+05	242.7	2.39	1.74
3.20	92.35	.275E+05	262.6	2.37	1.75

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (50770)	405.08	44.11	10.58	200.20	1.46	1.34
OUTFLOW: ID= 1 (60770)	405.08	44.12	10.58	200.20	1.46	1.34

CALIB	
STANDHYD (40780)|	Area (ha)= 24.57
ID= 1 DT= 5.0 min		Total Imp(%)= 52.00 Dir. Conn.(%)= 50.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	12.78	11.79
Dep. Storage	(mm)=	2.00	8.70
Average Slope	(%)=	1.50	1.50
Length	(m)=	404.74	43.00
Mannings n	=	0.015	0.330

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70

```
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        53.43
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       7.36 (ii)   19.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.17         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.80         1.64          3.443 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       177.73        194.03
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.84          0.91

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50780)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40780):    24.57    3.443    10.17   194.03
     + ID2= 2 ( 60770):   405.08   44.116    10.58   200.20
       ==================================================
       ID = 3 ( 50780):   429.65   46.873    10.58   199.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40790)|   Area    (ha)=   8.18
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.70   Dir. Conn.(%)=  62.80
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.38         2.81
     Dep. Storage     (mm)=       2.00         5.74
     Average Slope     (%)=       1.20         1.20
     Length            (m)=     233.56        52.00
     Mannings n           =      0.015        0.270

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.04
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       5.66 (ii)   18.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.20         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.75         0.41          1.168 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       183.93        200.51
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.87          0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40800)|   Area    (ha)=   5.15
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.40   Dir. Conn.(%)=  90.20
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.66         0.49
     Dep. Storage     (mm)=       2.00         7.60
     Average Slope     (%)=       1.40         1.40
     Length            (m)=     185.29        48.00
     Mannings n           =      0.015        0.330

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.33
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       4.70 (ii)   18.11 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.68         0.07          0.750 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25         10.17
     RUNOFF VOLUME    (mm)=     210.34       178.16        207.18
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.84          0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50795)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 40790):     8.18    1.168    10.17   200.51
     + ID2= 2 ( 40800):     5.15    0.750    10.17   207.18
       ==================================================
       ID = 3 ( 50795):    13.33    1.918    10.17   203.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| RESERVOIR( 70180)|     OVERFLOW IS ON
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000      0.0000   |    0.7780      0.6570
                          0.0040      0.0150   |    1.1550      0.7720
                          0.0090      0.0810   |    1.5780      0.8930
                          0.0120      0.1550   |    1.9240      0.9870
                          0.0140      0.2370   |    2.4190      1.1190
                          0.0160      0.3260   |    2.9510      1.2560
                          0.0620      0.3720   |    3.5980      1.3270
                          0.2560      0.4700   |    4.5570      1.3990
                          0.5310      0.5740   |    5.7230      1.4730

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 ( 50795)     13.332      1.918     10.17     203.09
   OUTFLOW: ID= 1 ( 70180)     13.332      1.447     10.58     203.02
   OVERFLOW:ID= 3 (  0003)      0.000      0.000      0.00       0.00

                  TOTAL NUMBER OF SIMULATION OVERFLOW  =     0
                  CUMULATIVE TIME OF OVERFLOW  (HOURS) =  0.00
                  PERCENTAGE OF TIME OVERFLOWING   (%) =  0.00

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 75.44
                  TIME SHIFT OF PEAK FLOW          (min)= 25.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8555

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  --------------------------
  | Junction Command(70181) |
  --------------------------

                             AREA     QPEAK   TPEAK     R.V.
                             (ha)     (cms)    (hrs)     (mm)
  INFLOW : ID= 3( 70180)    0.00      0.00    0.00      0.00
  OUTFLOW: ID= 2( 70181)    0.00      0.00    0.00      0.00

  --------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40805)|   Area    (ha)=   3.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.50   Dir. Conn.(%)=  34.70
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.41         2.16
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     154.27        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
    0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
    0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
    0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
    0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
    0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
    0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
    0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
    0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
    0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
    0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
    1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
    1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
    1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
    1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
    1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
    1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
    1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
    1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
    1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
    1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
    1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
    1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
    2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
    2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
    2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
    2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
    2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
    2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
    2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
    2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
    2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
    2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
    2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
    2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
    3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
    3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        54.50
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.28 (ii)   13.27 (ii)
```

```
      Unit Hyd. Tpeak (min)=       5.00        15.00
      Unit Hyd. peak  (cms)=       0.23         0.08
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.18         0.32          0.502 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
      RUNOFF VOLUME    (mm)=     211.34       176.25         188.43
      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
      RUNOFF COEFFICIENT   =       1.00         0.83           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  85.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40805):     3.57    0.502    10.17   188.43
      + ID2= 2 ( 70180):    13.33    1.447    10.58   203.02
        ==================================================
        ID = 3 ( 50790):    16.90    1.870    10.25   199.94

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50790)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
*** W A R N I N G :  HYDROGRAPH  70181 <ID= 2> IS DRY.
*** W A R N I N G :  HYDROGRAPH   0001 = HYDROGRAPH 0003
        ID1= 3 ( 50790):    16.90    1.870    10.25   199.94
      + ID2= 2 ( 70181):     0.00    0.000     0.00     0.00
        ==================================================
        ID = 1 ( 50790):    16.90    1.870    10.25   199.94

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50800)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50780):   429.65   46.873    10.58   199.85
      + ID2= 2 ( 50790):    16.90    1.870    10.25   199.94
        ==================================================
        ID = 3 ( 50800):   446.56   48.707    10.58   199.85

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60800)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         88.54        0.0450
                    3.00         88.18        0.0450
                    6.00         87.54        0.0450
                    9.00         87.44        0.0450
                   12.00         87.13        0.0450
                   15.00         87.23        0.0450
                   18.00         87.18        0.0450
                   21.00         86.49    0.0450 /0.0350  Main Channel
                   24.00         85.82        0.0350      Main Channel
                   27.00         86.44    0.0350 /0.0450  Main Channel
                   30.00         87.18        0.0450
                   33.00         87.16        0.0450
                   36.00         87.25        0.0450
                   39.00         87.46        0.0450
                   42.00         87.70        0.0450
                   45.00         87.80        0.0450
                   48.00         88.00        0.0450
                   49.00         88.12        0.0450
                   50.00         88.23        0.0450
                   52.00         88.59        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.12    85.95    .779E+02       0.0         0.37       48.75
        0.25    86.07    .312E+03       0.2         0.59       30.71
        0.37    86.19    .701E+03       0.5         0.77       23.44
        0.49    86.32    .125E+04       1.1         0.94       19.35
        0.62    86.44    .195E+04       1.9         1.09       16.67
        0.77    86.59    .299E+04       3.8         1.36       13.29
        0.92    86.74    .424E+04       6.2         1.59       11.42
        1.07    86.89    .570E+04       9.3         1.77       10.25
        1.22    87.04    .736E+04      13.0         1.92        9.44
        1.37    87.19    .938E+04      16.8         1.94        9.33
        1.52    87.34    .134E+05      22.9         1.86        9.74
        1.66    87.49    .182E+05      31.1         1.86        9.72
        1.81    87.64    .237E+05      41.6         1.91        9.51
        1.96    87.79    .298E+05      53.9         1.96        9.22
        2.11    87.94    .365E+05      68.9         2.05        8.84
        2.26    88.09    .437E+05      86.5         2.15        8.43
        2.41    88.24    .513E+05     106.2         2.25        8.04
        2.56    88.39    .592E+05     128.2         2.36        7.69
        2.71    88.54    .674E+05     152.5         2.46        7.36

                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50800)  446.56    48.71   10.58 199.85       1.90       1.94
   OUTFLOW: ID= 1 ( 60800)  446.56    48.37   10.75 199.85       1.90       1.94


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--------------------
| CALIB            |
| STANDHYD ( 40820)|   Area     (ha)=  14.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  20.97   Dir. Conn.(%)=  12.98
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=       2.98        11.23
      Dep. Storage     (mm)=       2.00         9.57
      Average Slope     (%)=       2.30         2.30
      Length            (m)=     307.74        44.00
      Mannings n           =      0.015        0.390

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

      Max.Eff.Inten.(mm/hr)=      52.83        56.06
                  over (min)        5.00        20.00
      Storage Coeff.  (min)=       5.49 (ii)   17.29 (ii)
      Unit Hyd. Tpeak (min)=       5.00        20.00
      Unit Hyd. peak  (cms)=       0.20         0.06
                                                          *TOTALS*
      PEAK FLOW       (cms)=       0.27         1.66          1.935 (iii)
      TIME TO PEAK    (hrs)=      10.17        10.17          10.17
      RUNOFF VOLUME    (mm)=     210.34       174.17         178.86
      TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
      RUNOFF COEFFICIENT   =       0.99         0.82           0.84

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  87.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50820)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40820):    14.21    1.935    10.17   178.86
      + ID2= 2 ( 60800):   446.56   48.367    10.75   199.85
        ==================================================
        ID = 3 ( 50820):   460.76   49.922    10.75   199.21

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ADD HYD  ( 50830)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50500):  2011.78  140.680    11.25   119.16
      + ID2= 2 ( 50820):   460.76   49.922    10.75   199.21
        ==================================================
        ID = 3 ( 50830):  2472.54  188.193    11.25   134.08

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60830)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                    0.00         82.12        0.0450
                   20.00         81.53        0.0450
                   24.00         81.26        0.0450
                   28.00         81.27        0.0450
                   32.00         80.34    0.0450 /0.0350  Main Channel
                   36.00         79.95        0.0350      Main Channel
                   40.00         80.78        0.0450
                   44.00         81.45        0.0450
                   48.00         81.53        0.0450
                   52.00         81.49        0.0450
                   56.00         81.51        0.0450
                   60.00         81.58        0.0450
                   64.00         81.58        0.0450
                   68.00         81.61        0.0450
                   72.00         81.75        0.0450
                   80.00         82.07        0.0450

       <---------------------- TRAVEL TIME TABLE ----------------------->
        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.10    80.05    .555E+01       0.0         0.24       5.45
        0.19    80.14    .222E+02       0.1         0.38       3.43
        0.29    80.24    .499E+02       0.3         0.50       2.62
        0.39    80.34    .888E+02       0.7         0.60       2.16
        0.50    80.45    .146E+03       1.4         0.77       1.68
        0.62    80.57    .213E+03       2.5         0.91       1.43
        0.73    80.68    .290E+03       3.8         1.02       1.27
        0.85    80.80    .375E+03       5.4         1.13       1.15
        0.96    80.91    .471E+03       7.6         1.26       1.03
        1.08    81.03    .578E+03      10.1         1.37       0.95
        1.19    81.14    .695E+03      13.0         1.46       0.89
        1.31    81.26    .823E+03      16.2         1.53       0.85
        1.43    81.37    .100E+04      19.7         1.53       0.85
        1.54    81.49    .121E+04      24.1         1.56       0.84
        1.66    81.60    .155E+04      29.0         1.46       0.89
        1.77    81.72    .204E+04      36.4         1.39       0.93
        1.89    81.84    .259E+04      45.6         1.38       0.95
        2.00    81.95    .320E+04      56.7         1.38       0.94
        2.12    82.07    .387E+04      69.6         1.40       0.93

      **** WARNING:  TRAVEL TIME TABLE EXCEEDED
                                    <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50830) 2472.54   188.19   11.25 134.08       2.11       1.40
   OUTFLOW: ID= 1 ( 60830) 2472.54   188.32   11.25 134.08       2.12       1.40


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40830)|   Area     (ha)=  45.51
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.71   Dir. Conn.(%)=  53.45
--------------------
                              IMPERVIOUS    PERVIOUS (i)
      Surface Area     (ha)=      30.36        15.15
      Dep. Storage     (mm)=       2.00         5.54
      Average Slope     (%)=       1.30         1.30
      Length            (m)=     550.83        40.00
      Mannings n           =      0.015        0.270

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
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                1.333    4.32 |  4.417   16.76 |  7.500   12.70 |  10.58   37.85
                1.417    4.32 |  4.500   16.76 |  7.583   12.70 |  10.67   37.85
                1.500    4.32 |  4.583   16.76 |  7.667   12.70 |  10.75   37.85
                1.583    4.32 |  4.667   16.76 |  7.750   12.70 |  10.83   37.85
                1.667    4.32 |  4.750   16.76 |  7.833   12.70 |  10.92   37.85
                1.750    4.32 |  4.833   16.76 |  7.917   12.70 |  11.00   37.85
                1.833    4.32 |  4.917   16.76 |  8.000   12.70 |  11.08   37.85
                1.917    4.32 |  5.000   16.76 |  8.083   12.70 |  11.17   37.85
                2.000    4.32 |  5.083   16.76 |  8.167   12.70 |  11.25   12.70
                2.083    4.32 |  5.167   16.76 |  8.250   12.70 |  11.33   12.70
                2.167    4.32 |  5.250   13.97 |  8.333   12.70 |  11.42   12.70
                2.250    6.35 |  5.333   13.97 |  8.417   12.70 |  11.50   12.70
                2.333    6.35 |  5.417   13.97 |  8.500   12.70 |  11.58   12.70
                2.417    6.35 |  5.500   13.97 |  8.583   12.70 |  11.67   12.70
                2.500    6.35 |  5.583   13.97 |  8.667   12.70 |  11.75   12.70
                2.583    6.35 |  5.667   13.97 |  8.750   12.70 |  11.83   12.70
                2.667    6.35 |  5.750   13.97 |  8.833   12.70 |  11.92   12.70
                2.750    6.35 |  5.833   13.97 |  8.917   12.70 |  12.00   12.70
                2.833    6.35 |  5.917   13.97 |  9.000   12.70 |  12.08   12.70
                2.917    6.35 |  6.000   13.97 |  9.083   12.70 |  12.17   12.70
                3.000    6.35 |  6.083   13.97 |  9.167   12.70 |
                3.083    6.35 |  6.167   13.97 |  9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        72.67
                   over (min)       10.00        20.00
     Storage Coeff.  (min)=       9.24 (ii)    18.80 (ii)
     Unit Hyd. Tpeak (min)=      10.00        20.00
     Unit Hyd. peak  (cms)=       0.12         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       3.56         2.89          6.453 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.25          10.17
     RUNOFF VOLUME    (mm)=     210.34       188.11         199.99
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.89           0.94

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 40840)|   Area    (ha)=   2.04
|ID= 1 DT= 5.0 min |   Total Imp(%)=  22.24   Dir. Conn.(%)=  14.44
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.45         1.59
     Dep. Storage     (mm)=       2.00         9.61
     Average Slope     (%)=       3.20         3.20
     Length            (m)=     116.69        69.00
     Mannings n           =      0.015        0.370

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.01
                   over (min)        5.00        20.00
     Storage Coeff.  (min)=       2.78 (ii)    16.34 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.28         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.04         0.24          0.280 (iii)
     TIME TO PEAK    (hrs)=       9.83        10.17          10.17
     RUNOFF VOLUME    (mm)=     210.34       174.11         179.34
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.82           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
               YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  87.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50840)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 40830):    45.51   6.453    10.17   199.99
      + ID2= 2 ( 40840):     2.04   0.280    10.17   179.34
        ====================================================
        ID = 3 ( 50840):    47.56   6.733    10.17   199.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50840)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)     (cms)    (hrs)     (mm)
        ID1= 3 ( 50840):    47.56   6.733    10.17   199.10
      + ID2= 2 ( 60830):  2472.54 188.323    11.25   134.08
        ====================================================
        ID = 1 ( 50840):  2520.10 192.954    11.25   135.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| ROUTE CHN( 60840)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         82.18        0.0450
                  32.00         79.04        0.0450
                  40.00         78.76        0.0450
                  48.00         78.58        0.0450
                  56.00         78.21        0.0450
                  64.00         76.89        0.0350      Main Channel
                  72.00         78.08        0.0450
                  80.00         79.44        0.0450
                  88.00         80.28        0.0450
                  96.00         80.92        0.0450
                 104.00         81.29        0.0450
                 112.00         81.62        0.0450
                 120.00         81.76        0.0450
                 128.00         81.81        0.0450
                 140.00         82.02        0.0450

      <---------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
         (m)     (m)     (cu.m.)       (cms)       (m/s)       (min)
        0.27   77.16    .320E+03         0.2        0.48       24.00
        0.54   77.43    .128E+04         1.4        0.75       15.12
        0.81   77.70    .288E+04         4.2        0.99       11.54
        1.08   77.97    .512E+04         9.0        1.20        9.53
        1.35   78.24    .799E+04        16.6        1.42        8.02
        1.62   78.51    .119E+05        26.9        1.54        7.40
        1.89   78.78    .176E+05        41.0        1.59        7.15
        2.16   79.05    .252E+05        62.9        1.71        6.68
        2.43   79.32    .341E+05        93.9        1.89        6.05
        2.70   79.59    .438E+05       131.1        2.05        5.56
        2.97   79.86    .544E+05       175.1        2.20        5.18
        3.24   80.13    .660E+05       226.4        2.35        4.86
        3.51   80.40    .787E+05       284.9        2.48        4.60
        3.77   80.67    .924E+05       351.1        2.60        4.39
        4.04   80.94    .107E+06       425.7        2.72        4.20
        4.31   81.21    .124E+06       507.1        2.81        4.06
        4.58   81.48    .141E+06       598.4        2.90        3.94
        4.85   81.75    .161E+06       695.9        2.96        3.86
        5.12   82.02    .185E+06       800.9        2.97        3.85

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50840) 2520.10   192.95   11.25 135.30      3.06      2.25
   OUTFLOW: ID= 1 ( 60840) 2520.10   192.51   11.25 135.30      3.05      2.25


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40850)|   Area    (ha)=  26.33
|ID= 1 DT= 5.0 min |   Total Imp(%)=  30.92   Dir. Conn.(%)=  24.62
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       8.14        18.19
     Dep. Storage     (mm)=       2.00         7.29
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     418.93       142.00
     Mannings n           =      0.015        0.310

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        56.04
                   over (min)        5.00        30.00
     Storage Coeff.  (min)=       6.89 (ii)    28.54 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.18         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.95         2.46          3.315 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.42          10.17
     RUNOFF VOLUME    (mm)=     210.34       180.42         187.79
     TOTAL RAINFALL   (mm)=     212.34       212.34         212.34
     RUNOFF COEFFICIENT   =       0.99         0.85           0.88

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50850)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)     (cms)    (hrs)     (mm)
        ID1= 1 ( 40850):    26.33   3.315    10.17   187.79
      + ID2= 2 ( 60840):  2520.10 192.513    11.25   135.30
        ====================================================
        ID = 3 ( 50850):  2546.42 195.071    11.25   135.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 40880)|   Area    (ha)=  56.14
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  34.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      20.77        35.37
     Dep. Storage     (mm)=       2.00         8.79
     Average Slope     (%)=       1.30         1.30
     Length            (m)=     611.77       120.00
     Mannings n           =      0.015        0.330

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

		0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
		0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
		0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
		0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
		0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
		0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
		0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
		0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
		0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
		0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
		0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
		1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
		1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
		1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
		1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
		1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
		1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
		1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
		1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
		1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
		1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
		1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
		1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
		2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
		2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
		2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
		2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
		2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
		2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
		2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
		2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
		2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
		2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
		2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
		2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
		3.000	6.35	6.083	13.97	9.167	12.70		
		3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	53.94		
over (min)	10.00	35.00		
Storage Coeff. (min)=	9.85 (ii)	33.32 (ii)		
Unit Hyd. Tpeak (min)=	10.00	35.00		
Unit Hyd. peak (cms)=	0.11	0.03		
			TOTALS	
PEAK FLOW (cms)=	2.79	4.44	6.924 (iii)	
TIME TO PEAK (hrs)=	10.17	10.50	10.25	
RUNOFF VOLUME (mm)=	210.34	180.15	190.42	
TOTAL RAINFALL (mm)=	212.34	212.34	212.34	
RUNOFF COEFFICIENT =	0.99	0.85	0.90	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(60880)
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<------ DATA FOR SECTION (1.1) ------>

Distance	Elevation	Manning	
0.00	85.55	0.0450	
24.00	85.23	0.0450	
28.00	85.17	0.0450	
32.00	85.07	0.0450	
36.00	84.96	0.0350	Main Channel
40.00	84.96	0.0350	Main Channel
44.00	85.00	0.0350 /0.0450	Main Channel
48.00	85.03	0.0450	
52.00	85.18	0.0450	
56.00	85.22	0.0450	
60.00	85.31	0.0450	
64.00	85.33	0.0450	
68.00	85.38	0.0450	
80.00	85.59	0.0450	

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.01	84.96	.992E+01	0.0	0.05	238.32
0.04	84.99	.159E+03	0.0	0.21	57.53
0.07	85.03	.408E+03	0.2	0.32	38.32
0.10	85.06	.751E+03	0.4	0.40	30.54
0.13	85.09	.114E+04	0.7	0.47	25.77
0.16	85.12	.158E+04	1.2	0.53	22.66
0.19	85.15	.206E+04	1.7	0.59	20.45
0.22	85.18	.259E+04	2.3	0.64	18.91
0.25	85.21	.321E+04	3.0	0.67	18.12
0.29	85.24	.393E+04	3.8	0.70	17.32
0.32	85.27	.473E+04	4.8	0.73	16.56
0.35	85.30	.562E+04	5.9	0.76	15.89
0.38	85.34	.663E+04	7.0	0.77	15.69
0.41	85.37	.777E+04	8.5	0.80	15.20
0.44	85.40	.902E+04	10.2	0.82	14.69
0.47	85.43	.104E+05	12.2	0.85	14.19
0.50	85.46	.118E+05	14.3	0.88	13.73
0.53	85.49	.133E+05	16.7	0.91	13.31
0.56	85.52	.150E+05	19.3	0.94	12.91

		<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (40880)	56.14	6.92	10.25	190.42	0.38	0.77
OUTFLOW: ID= 1 (60880)	56.14	6.57	10.50	190.39	0.37	0.77

ROUTEPIPE(80880)		PIPE Number = 1.00		
IN= 2---> OUT= 1	Width (mm)=2400.00	Height (mm)=1900.00		
DT= 5.0 min	Length (m)= 888.03			
	Slope (m/m)= 0.004			
	Manning n = 0.013			

<---------- TRAVEL TIME TABLE ---------->

DEPTH (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME min
0.10	.213E+03	0.2	0.93	15.91
0.20	.426E+03	0.7	1.41	10.53
0.30	.639E+03	1.3	1.76	8.42
0.40	.853E+03	2.0	2.04	7.25
0.50	.107E+04	2.7	2.27	6.51
0.60	.128E+04	3.6	2.47	5.99
0.70	.149E+04	4.4	2.64	5.60
0.80	.171E+04	5.4	2.79	5.30
0.90	.192E+04	6.3	2.92	5.06
1.00	.213E+04	7.3	3.04	4.87
1.10	.234E+04	8.3	3.15	4.71
1.20	.256E+04	9.3	3.24	4.57
1.30	.277E+04	10.4	3.33	4.45
1.40	.298E+04	11.4	3.40	4.35
1.50	.320E+04	12.5	3.48	4.26
1.60	.341E+04	13.6	3.54	4.18
1.70	.362E+04	14.7	3.60	4.11
1.80	.384E+04	15.8	3.66	4.05
1.90	.405E+04	16.9	3.71	3.99

		<---- hydrograph ---->			<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (60880)	56.14	6.57	10.50	190.39	0.93	2.95
OUTFLOW: ID= 1 (80880)	56.14	6.56	10.58	190.39	0.92	2.95

CALIB	
STANDHYD (40890)		Area (ha)= 41.71	
ID= 1 DT= 5.0 min		Total Imp(%)= 43.73	Dir. Conn.(%)= 32.85

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	18.24	23.47
Dep. Storage	(mm)=	2.00	8.20
Average Slope	(%)=	1.10	1.10
Length	(m)=	527.32	85.00
Mannings n	=	0.015	0.350

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	61.31		
over (min)	10.00	30.00		
Storage Coeff. (min)=	9.47 (ii)	29.22 (ii)		
Unit Hyd. Tpeak (min)=	10.00	30.00		
Unit Hyd. peak (cms)=	0.12	0.04		
			TOTALS	
PEAK FLOW (cms)=	2.01	3.46	5.319 (iii)	
TIME TO PEAK (hrs)=	10.17	10.42	10.17	
RUNOFF VOLUME (mm)=	210.34	180.04	189.99	
TOTAL RAINFALL (mm)=	212.34	212.34	212.34	
RUNOFF COEFFICIENT =	0.99	0.85	0.89	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 88.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (40900)		Area (ha)= 13.56	
ID= 1 DT= 5.0 min		Total Imp(%)= 62.00	Dir. Conn.(%)= 48.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.41	5.15
Dep. Storage	(mm)=	1.00	7.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	300.67	43.00
Mannings n	=	0.015	0.310

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	6.35	6.250	23.11	9.33	52.83
0.167	0.00	3.250	12.70	6.333	23.11	9.42	52.83
0.250	6.35	3.333	12.70	6.417	23.11	9.50	52.83
0.333	6.35	3.417	12.70	6.500	23.11	9.58	52.83
0.417	6.35	3.500	12.70	6.583	23.11	9.67	52.83
0.500	6.35	3.583	12.70	6.667	23.11	9.75	52.83
0.583	6.35	3.667	12.70	6.750	23.11	9.83	52.83
0.667	6.35	3.750	12.70	6.833	23.11	9.92	52.83
0.750	6.35	3.833	12.70	6.917	23.11	10.00	52.83
0.833	6.35	3.917	12.70	7.000	23.11	10.08	52.83
0.917	6.35	4.000	12.70	7.083	23.11	10.17	52.83
1.000	6.35	4.083	12.70	7.167	23.11	10.25	37.85
1.083	6.35	4.167	12.70	7.250	12.70	10.33	37.85
1.167	6.35	4.250	16.76	7.333	12.70	10.42	37.85
1.250	4.32	4.333	16.76	7.417	12.70	10.50	37.85
1.333	4.32	4.417	16.76	7.500	12.70	10.58	37.85
1.417	4.32	4.500	16.76	7.583	12.70	10.67	37.85
1.500	4.32	4.583	16.76	7.667	12.70	10.75	37.85
1.583	4.32	4.667	16.76	7.750	12.70	10.83	37.85
1.667	4.32	4.750	16.76	7.833	12.70	10.92	37.85
1.750	4.32	4.833	16.76	7.917	12.70	11.00	37.85
1.833	4.32	4.917	16.76	8.000	12.70	11.08	37.85
1.917	4.32	5.000	16.76	8.083	12.70	11.17	37.85
2.000	4.32	5.083	16.76	8.167	12.70	11.25	12.70
2.083	4.32	5.167	16.76	8.250	12.70	11.33	12.70
2.167	4.32	5.250	13.97	8.333	12.70	11.42	12.70
2.250	6.35	5.333	13.97	8.417	12.70	11.50	12.70
2.333	6.35	5.417	13.97	8.500	12.70	11.58	12.70
2.417	6.35	5.500	13.97	8.583	12.70	11.67	12.70
2.500	6.35	5.583	13.97	8.667	12.70	11.75	12.70
2.583	6.35	5.667	13.97	8.750	12.70	11.83	12.70
2.667	6.35	5.750	13.97	8.833	12.70	11.92	12.70
2.750	6.35	5.833	13.97	8.917	12.70	12.00	12.70
2.833	6.35	5.917	13.97	9.000	12.70	12.08	12.70
2.917	6.35	6.000	13.97	9.083	12.70	12.17	12.70
3.000	6.35	6.083	13.97	9.167	12.70		
3.083	6.35	6.167	13.97	9.250	52.83		

Max.Eff.Inten.(mm/hr)=	52.83	71.05		
over (min)	5.00	20.00		
Storage Coeff. (min)=	6.96 (ii)	16.57 (ii)		
Unit Hyd. Tpeak (min)=	5.00	20.00		
Unit Hyd. peak (cms)=	0.17	0.06		
			TOTALS	
PEAK FLOW (cms)=	0.96	0.98	1.931 (iii)	
TIME TO PEAK (hrs)=	10.17	10.17	10.17	
RUNOFF VOLUME (mm)=	211.34	186.57	198.46	
TOTAL RAINFALL (mm)=	212.34	212.34	212.34	
RUNOFF COEFFICIENT =	1.00	0.88	0.93	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

DUHYD (90020)	
Inlet Cap.= 0.960	
#of Inlets= 1	
Total(cms)= 1.0|	AREA	QPEAK	TPEAK	R.V.

```
                      (ha)      (cms)      (hrs)     (mm)
     TOTAL HYD.(ID= 1):  13.56      1.93     10.17  198.46
     ==================================================
     MAJOR SYS.(ID= 2):   2.29      0.97     10.17  198.46
     MINOR SYS.(ID= 3):  11.27      0.96      9.33  198.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40890):    41.71   5.319    10.17   189.99
      + ID2= 2 ( 50850):  2546.42 195.071    11.25   135.85
        ==================================================
        ID = 3 ( 50890):  2588.13 199.327    11.25   136.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50890)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 ( 50890):  2588.13 199.327    11.25   136.72
      + ID2= 2 ( 80880):    56.14   6.560    10.58   190.39
        ==================================================
        ID = 1 ( 50890):  2644.27 205.502    11.25   137.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  ( 50890)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 50890):  2644.27 205.502    11.25   137.86
      + ID2= 2 ( 90020):    11.27   0.960     9.33   198.46
        ==================================================
        ID = 3 ( 50890):  2655.54 206.462    11.25   138.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ROUTE CHN( 60900)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------
               <------ DATA FOR SECTION (   1.1) ------>
               Distance      Elevation       Manning
                   0.00         79.05        0.0450
                   2.00         78.40        0.0450
                   4.00         77.75        0.0450
                   6.00         77.16        0.0450
                   8.00         76.78        0.0450
                  10.00         76.65        0.0450
                  12.00         76.60        0.0450
                  14.00         76.58        0.0450
                  16.00         76.08        0.0450
                  18.00         75.49    0.0450 /0.0350  Main Channel
                  20.00         75.46        0.0350      Main Channel
                  22.00         75.52    0.0350 /0.0450  Main Channel
                  24.00         76.15        0.0450
                  26.00         76.44        0.0450
                  28.00         76.56        0.0450
                  30.00         76.68        0.0450
                  32.00         76.86        0.0450
                  34.00         77.01        0.0450
                  36.00         77.10        0.0450
                  40.00         79.16        0.0450

      <--------------------- TRAVEL TIME TABLE ---------------------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.03    75.49    .127E+02       0.0         0.14      32.03
        0.22    75.68    .231E+03       0.6         0.69       6.29
        0.40    75.87    .510E+03       2.0         1.01       4.28
        0.59    76.05    .849E+03       4.1         1.25       3.45
        0.78    76.24    .125E+04       6.9         1.43       3.02
        0.97    76.43    .175E+04      10.6         1.57       2.75
        1.15    76.62    .240E+04      14.6         1.57       2.75
        1.34    76.80    .343E+04      21.1         1.60       2.71
        1.53    76.99    .465E+04      30.1         1.68       2.58
        1.71    77.18    .605E+04      41.3         1.77       2.44
        1.90    77.36    .754E+04      55.7         1.92       2.26
        2.09    77.55    .908E+04      72.1         2.06       2.10
        2.27    77.74    .107E+05      90.6         2.20       1.96
        2.46    77.92    .123E+05     111.1         2.34       1.84
        2.65    78.11    .140E+05     133.5         2.48       1.74
        2.84    78.30    .157E+05     157.9         2.61       1.66
        3.02    78.49    .175E+05     184.1         2.73       1.58
        3.21    78.67    .193E+05     212.1         2.85       1.52
        3.40    78.86    .211E+05     242.1         2.97       1.46

                                    <---- hydrograph ---->   <-pipe / channel->
                              AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
                              (ha)    (cms)   (hrs)   (mm)       (m)      (m/s)
   INFLOW : ID= 2 ( 50890) 2655.54   206.46   11.25 138.11      3.17      2.83
   OUTFLOW: ID= 1 ( 60900) 2655.54   206.51   11.25 138.11      3.17      2.82


     **** WARNING:  COMPUTATIONS FAILED TO CONVERGE.

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD ( 40910)|   Area    (ha)=   6.92
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.98   Dir. Conn.(%)=  52.91
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.77         2.15
     Dep. Storage     (mm)=       2.00         7.07
     Average Slope     (%)=       1.70         1.70
     Length            (m)=     214.73        44.00
     Mannings n           =      0.015        0.280

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
    TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083     0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167     0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250     6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333     6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417     6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500     6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583     6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667     6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750     6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833     6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917     6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000     6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083     6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167     6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250     4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333     4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417     4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500     4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583     4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667     4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750     4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833     4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917     4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000     4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083     4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167     4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250     6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333     6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417     6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500     6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583     6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667     6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750     6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833     6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917     6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000     6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083     6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        79.25
                  over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.85 (ii)   14.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.54         0.46         1.000 (iii)
     TIME TO PEAK    (hrs)=      10.17        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       190.62        201.05
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.90          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  90.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 50910)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 ( 40910):     6.92    1.000    10.17   201.05
      + ID2= 2 ( 60900):  2655.54 206.514    11.25   138.11
        ==================================================
        ID = 3 ( 50910):  2662.46 207.058    11.25   138.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| STANDHYD (******)|   Area    (ha)=   5.85
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.79         0.06
     Dep. Storage     (mm)=       2.00         4.48
     Average Slope     (%)=       1.70         1.00
     Length            (m)=      78.30         0.00
     Mannings n           =      0.013        0.030

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
    TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083     0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
   0.167     0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
   0.250     6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
   0.333     6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
   0.417     6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
   0.500     6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
   0.583     6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
   0.667     6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
   0.750     6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
   0.833     6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
   0.917     6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
   1.000     6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
   1.083     6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
   1.167     6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
   1.250     4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
   1.333     4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
   1.417     4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
   1.500     4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
   1.583     4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
   1.667     4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
   1.750     4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
   1.833     4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
   1.917     4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
   2.000     4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
   2.083     4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
   2.167     4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
   2.250     6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
   2.333     6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
   2.417     6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
   2.500     6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
   2.583     6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
   2.667     6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
   2.750     6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
   2.833     6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
   2.917     6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
   3.000     6.35 | 6.083   13.97 | 9.167   12.70 |
   3.083     6.35 | 6.167   13.97 | 9.250   52.83 |

     Max.Eff.Inten.(mm/hr)=      52.83        52.18
                  over (min)       5.00         5.00
     Storage Coeff.  (min)=       2.43 (ii)    2.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.30         0.30
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.85         0.01         0.858 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.17         10.17
     RUNOFF VOLUME    (mm)=     210.34       190.35        210.14
     TOTAL RAINFALL   (mm)=     212.34       212.34        212.34
     RUNOFF COEFFICIENT   =       0.99         0.90          0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  93.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     5.85   0.858    10.17   210.14
      + ID2= 2 (******):     5.09   2.029    10.33   195.86
        ==================================================
        ID = 3 (******):    10.94   2.799    10.17   203.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.00   0.000    10.17   206.28
      + ID2= 2 (******):    10.29   2.144    10.33   195.86
        ==================================================
        ID = 3 (******):    10.29   2.144    10.33   195.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    10.29   2.144    10.33   195.86
      + ID2= 2 (******):    10.94   2.799    10.17   203.50
        ==================================================
        ID = 1 (******):    21.22   4.926    10.17   199.80

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
12547> --------------------------------------------------------------------------------
12548> --------------------
12549> | ROUTE CHN(******)|
12550> | IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
12551> --------------------
12552>                <------ DATA FOR SECTION (   1.1) ------>
12553>                Distance      Elevation       Manning
12554>                    0.00         426.51        0.0450
12555>                    0.98         426.14        0.0350      Main Channel
12556>                    2.04         426.14        0.0350      Main Channel
12557>                   20.51         426.51        0.0350      Main Channel
12558>
12559>       <---------------------- TRAVEL TIME TABLE ----------------------->
12560>        DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
12561>          (m)     (m)     (cu.m.)      (cms)        (m/s)      (min)
12562>         0.00  426.14    .579E+00       0.0          0.03     191.52
12563>         0.02  426.16    .114E+02       0.0          0.14      39.52
12564>         0.04  426.18    .285E+02       0.0          0.19      27.56
12565>         0.06  426.20    .520E+02       0.0          0.24      22.17
12566>         0.08  426.22    .818E+02       0.1          0.28      18.92
12567>         0.10  426.24    .118E+03       0.1          0.32      16.68
12568>         0.12  426.26    .161E+03       0.2          0.36      15.02
12569>         0.14  426.27    .210E+03       0.3          0.39      13.73
12570>         0.16  426.29    .265E+03       0.3          0.42      12.69
12571>         0.18  426.31    .326E+03       0.5          0.45      11.82
12572>         0.20  426.33    .394E+03       0.6          0.48      11.10
12573>         0.22  426.35    .469E+03       0.7          0.51      10.47
12574>         0.24  426.37    .549E+03       0.9          0.54       9.93
12575>         0.26  426.39    .637E+03       1.1          0.56       9.46
12576>         0.28  426.41    .730E+03       1.3          0.59       9.03
12577>         0.30  426.43    .830E+03       1.6          0.62       8.65
12578>         0.32  426.45    .936E+03       1.9          0.64       8.31
12579>         0.34  426.47    .105E+04       2.2          0.67       8.01
12580>         0.35  426.49    .117E+04       2.5          0.69       7.72
12581>
12582>      **** WARNING:  TRAVEL TIME TABLE EXCEEDED
12583>                                    <---- hydrograph ---->   <-pipe / channel->
12584>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
12585>                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
12586>    INFLOW : ID= 2 (******)   21.22     4.93   10.17 199.80      0.35      0.68
12587>    OUTFLOW: ID= 1 (******)   21.22     4.73   10.42 199.75      0.35      0.69
12588>
12589>
12590>
12591> --------------------------------------------------------------------------------
12592> --------------------
12593> | ROUTEPIPE(******)|     PIPE Number      =   1.00
12594> | IN= 2---> OUT= 1 |     Width       (mm)=2400.00     Height   (mm)= 900.00
12595> | DT=  5.0 min     |     Length        (m)= 372.00
12596> --------------------     Slope      (m/m)=  0.004
12597>                          Manning n        =  0.013
12598>
12599>       <----------------- TRAVEL TIME TABLE ---------------------->
12600>          DEPTH      VOLUME    FLOW RATE    VELOCITY    TRAV.TIME
12601>            (m)      (cu.m.)      (cms)        (m/s)        min
12602>           0.05     .423E+02       0.1          0.58       10.67
12603>           0.09     .846E+02       0.2          0.90        6.89
12604>           0.14     .127E+03       0.4          1.15        5.39
12605>           0.19     .169E+03       0.6          1.36        4.55
12606>           0.24     .211E+03       0.9          1.55        4.01
12607>           0.28     .254E+03       1.2          1.71        3.63
12608>           0.33     .296E+03       1.5          1.85        3.34
12609>           0.38     .338E+03       1.8          1.99        3.12
12610>           0.43     .381E+03       2.2          2.11        2.94
12611>           0.47     .423E+03       2.5          2.22        2.80
12612>           0.52     .465E+03       2.9          2.32        2.67
12613>           0.57     .507E+03       3.3          2.41        2.57
12614>           0.62     .550E+03       3.7          2.50        2.48
12615>           0.66     .592E+03       4.1          2.58        2.40
12616>           0.71     .634E+03       4.5          2.66        2.33
12617>           0.76     .677E+03       5.0          2.73        2.27
12618>           0.81     .719E+03       5.4          2.80        2.21
12619>           0.85     .761E+03       5.9          2.86        2.17
12620>           0.90     .804E+03       6.3          2.92        2.12
12621>                                    <---- hydrograph ---->   <-pipe / channel->
12622>                               AREA    QPEAK   TPEAK   R.V.   MAX DEPTH  MAX VEL
12623>                               (ha)    (cms)   (hrs)   (mm)      (m)       (m/s)
12624>    INFLOW : ID= 2 (******)    4.11     0.60   10.17 206.28      0.19      1.34
12625>    OUTFLOW: ID= 1 (******)    4.11     0.60   10.17 206.28      0.18      1.34
12626>
12627>
12628>
12629> --------------------------------------------------------------------------------
12630> --------------------
12631> | CALIB            |
12632> | NASHYD   (******)|   Area     (ha)=  17.88   Curve Number    (CN)= 93.0
12633> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
12634> --------------------   U.H. Tp(hrs)=   0.48
12635>
12636>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
12637>
12638>
12639>                                ---- TRANSFORMED HYETOGRAPH ----
12640>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
12641>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
12642>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
12643>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
12644>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
12645>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
12646>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
12647>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
12648>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
12649>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
12650>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
12651>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
12652>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
12653>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
12654>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
12655>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
12656>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
12657>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
12658>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
12659>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
12660>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
12661>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
12662>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
12663>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
12664>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
12665>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
12666>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
12667>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
12668>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
12669>                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
12670>                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
12671>                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
12672>                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
12673>                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
12674>                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
12675>                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
12676>                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
12677>                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
12678>                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
12679>
12680>      Unit Hyd Qpeak  (cms)=   1.423
12681>
12682>      PEAK FLOW       (cms)=   2.305 (i)
12683>      TIME TO PEAK    (hrs)=  10.417
12684>      RUNOFF VOLUME    (mm)= 190.341
12685>      TOTAL RAINFALL   (mm)= 212.340
12686>      RUNOFF COEFFICIENT   =   0.896
12687>
12688>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12689>
12690> --------------------------------------------------------------------------------
12691> --------------------
12692> | CALIB            |
12693> | NASHYD   (******)|   Area     (ha)=   0.44   Curve Number    (CN)= 93.0
12694> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
12695> --------------------   U.H. Tp(hrs)=   0.19
12696>
12697>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
12698>
12699>
12700>                                ---- TRANSFORMED HYETOGRAPH ----
12701>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
12702>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
12703>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
12704>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
12705>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
12706>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
12707>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
12708>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
12709>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
12710>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
12711>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
12712>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
12713>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
12714>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
12715>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
12716>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
12717>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
12718>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
12719>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
12720>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
12721>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
12722>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
12723>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
12724>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
12725>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
12726>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
12727>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
12728>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
12729>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
12730>                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
12731>                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
12732>                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
12733>                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
12734>                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
12735>                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
12736>                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
12737>                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
12738>                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
12739>                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
12740>
12741>      Unit Hyd Qpeak  (cms)=   0.088
12742>
12743>      PEAK FLOW       (cms)=   0.063 (i)
12744>      TIME TO PEAK    (hrs)=  10.167
12745>      RUNOFF VOLUME    (mm)= 189.909
12746>      TOTAL RAINFALL   (mm)= 212.340
12747>      RUNOFF COEFFICIENT   =   0.894
12748>
12749>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12750>
12751> --------------------------------------------------------------------------------
12752>
12753> --------------------
12754> | ADD HYD  (******)|
12755> |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
12756> --------------------          (ha)    (cms)    (hrs)     (mm)
12757>         ID1= 1 (******):     17.88    2.305    10.42   190.34
12758>       + ID2= 2 (******):      0.44    0.063    10.17   189.91
12759>         ================================================
12760>         ID = 3 (******):     18.32    2.359    10.33   190.33
12761>
12762>      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
12763> --------------------------------------------------------------------------------
12764> --------------------
12765> | CALIB            |
12766> | NASHYD   (******)|   Area     (ha)=   0.33   Curve Number    (CN)= 93.0
12767> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
12768> --------------------   U.H. Tp(hrs)=   0.18
12769>
12770>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
12771>
12772>
12773>                                ---- TRANSFORMED HYETOGRAPH ----
12774>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
12775>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
12776>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
12777>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
12778>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
12779>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
12780>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
12781>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
12782>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
12783>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
12784>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
12785>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
12786>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
12787>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
12788>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
12789>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
12790>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
12791>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
12792>                 1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
12793>                 1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
12794>                 1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
12795>                 1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
12796>                 1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
12797>                 1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
12798>                 1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
12799>                 2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
12800>                 2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
12801>                 2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
12802>                 2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
12803>                 2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
12804>                 2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
12805>                 2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
12806>                 2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
12807>                 2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
12808>                 2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
12809>                 2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
12810>                 2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
12811>                 3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
12812>                 3.083    6.35 | 6.167   13.97 | 9.250   52.83 |
12813>
12814>      Unit Hyd Qpeak  (cms)=   0.070
12815>
12816>      PEAK FLOW       (cms)=   0.048 (i)
12817>      TIME TO PEAK    (hrs)=  10.167
12818>      RUNOFF VOLUME    (mm)= 189.805
12819>      TOTAL RAINFALL   (mm)= 212.340
12820>      RUNOFF COEFFICIENT   =   0.894
12821>
12822>      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
12823>
12824> --------------------------------------------------------------------------------
12825> --------------------
12826> | CALIB            |
12827> | NASHYD   (******)|   Area     (ha)=   7.90   Curve Number    (CN)= 93.0
12828> |ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
12829> --------------------   U.H. Tp(hrs)=   0.39
12830>
12831>          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
12832>
12833>
12834>                                ---- TRANSFORMED HYETOGRAPH ----
12835>                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
12836>                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
12837>                 0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
12838>                 0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
12839>                 0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
12840>                 0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
12841>                 0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
12842>                 0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
12843>                 0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
12844>                 0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
12845>                 0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
12846>                 0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
12847>                 0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
12848>                 1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
12849>                 1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
12850>                 1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
12851>                 1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
12852>                 1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
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                1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
                1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
                1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
                1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
                1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
                1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
                1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
                2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
                2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
                2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
                2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
                2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
                2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
                2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
                2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
                2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
                2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
                2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
                2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
                3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
                3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.774

     PEAK FLOW       (cms)=   1.070 (i)
     TIME TO PEAK    (hrs)=  10.250
     RUNOFF VOLUME    (mm)= 190.326
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.33   0.048    10.17   189.81
      + ID2= 2 (******):     7.90   1.070    10.25   190.33
        ================================================
        ID = 3 (******):     8.23   1.115    10.25   190.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=   0.19   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.15

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   0.048

     PEAK FLOW       (cms)=   0.027 (i)
     TIME TO PEAK    (hrs)=  10.167
     RUNOFF VOLUME    (mm)= 189.253
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.891

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     0.19   0.027    10.17   189.25
      + ID2= 2 (******):    18.32   2.359    10.33   190.33
        ================================================
        ID = 3 (******):    18.51   2.382    10.33   190.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    18.51   2.382    10.33   190.32
      + ID2= 2 (******):     8.23   1.115    10.25   190.31
        ================================================
        ID = 1 (******):    26.74   3.490    10.33   190.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):     4.11   0.601    10.17   206.28
      + ID2= 2 (******):    26.74   3.490    10.33   190.31
        ================================================
        ID = 3 (******):    30.85   4.026    10.25   192.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (******)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (******):    30.85   4.026    10.25   192.44
      + ID2= 2 (******):    21.22   4.732    10.42   199.75
        ================================================
        ID = 1 (******):    52.07   8.696    10.33   195.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ROUTE CHN(******)|
| IN= 2---> OUT= 1 |     Routing time step (min)'=  5.00
--------------------

                <------ DATA FOR SECTION (   1.1) ------>
                Distance      Elevation       Manning
                   0.00        418.26        0.0450
                  40.58        417.27        0.0450
                  68.64        416.80        0.0450
                 140.74        415.56        0.0450
                 163.74        415.03    0.0450 /0.0350  Main Channel
                 211.93        413.30        0.0350      Main Channel
                 250.43        411.92        0.0350      Main Channel
                 258.86        411.77        0.0350      Main Channel
                 276.07        411.80        0.0350      Main Channel
                 290.03        411.70        0.0350      Main Channel
                 294.99        411.74        0.0350      Main Channel
                 298.74        411.97        0.0350      Main Channel
                 309.80        412.64        0.0350      Main Channel
                 321.40        413.39        0.0350      Main Channel
                 332.67        415.03    0.0350 /0.0450  Main Channel
                 344.47        416.63        0.0450
                 360.44        418.31        0.0450
                 381.73        419.43        0.0450
                 385.80        419.95        0.0450
                 389.30        420.75        0.0450

      <---------- TRAVEL TIME TABLE ---------->
       DEPTH    ELEV      VOLUME    FLOW RATE    VELOCITY   TRAV.TIME
        (m)      (m)     (cu.m.)      (cms)        (m/s)      (min)
        0.33   412.03    .115E+05      14.5         1.18      13.21
        0.67   412.36    .302E+05      61.5         1.91       8.18
        1.00   412.70    .535E+05     139.9         2.46       6.38
        1.33   413.03    .814E+05     252.5         2.91       5.37
        1.66   413.36    .114E+06     402.0         3.32       4.72
        2.00   413.70    .150E+06     597.3         3.74       4.19
        2.33   414.03    .190E+06     834.3         4.12       3.80
        2.66   414.36    .234E+06    1114.3         4.47       3.50
        2.99   414.69    .281E+06    1439.4         4.80       3.26
        3.33   415.03    .332E+06    1811.8         5.12       3.06
        3.69   415.39    .393E+06    2361.5         5.65       2.77
        4.05   415.75    .459E+06    2978.2         6.10       2.57
        4.41   416.10    .533E+06    3668.2         6.46       2.42
        4.76   416.46    .615E+06    4437.5         6.78       2.31
        5.12   416.82    .705E+06    5290.7         7.05       2.22
        5.48   417.18    .804E+06    6232.2         7.29       2.15
        5.84   417.54    .910E+06    7276.0         7.51       2.08
        6.20   417.90    .102E+07    8417.1         7.74       2.02
        6.56   418.26    .114E+07    9654.5         7.95       1.97

                                     <---- hydrograph ---->   <-pipe / channel->
                                AREA    QPEAK    TPEAK   R.V.   MAX DEPTH  MAX VEL
                                (ha)    (cms)    (hrs)   (mm)       (m)      (m/s)
    INFLOW : ID= 2 (******)    52.07     8.70    10.33 195.42      0.20       1.18
    OUTFLOW: ID= 1 (******)    52.07     8.36    10.58 195.42      0.19       1.18

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--------------------
| CALIB            |
| NASHYD   (******)|   Area     (ha)=  31.02   Curve Number    (CN)= 93.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   4.48   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.55

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    6.35 | 6.250   23.11 |  9.33   52.83
               0.167    0.00 | 3.250   12.70 | 6.333   23.11 |  9.42   52.83
               0.250    6.35 | 3.333   12.70 | 6.417   23.11 |  9.50   52.83
               0.333    6.35 | 3.417   12.70 | 6.500   23.11 |  9.58   52.83
               0.417    6.35 | 3.500   12.70 | 6.583   23.11 |  9.67   52.83
               0.500    6.35 | 3.583   12.70 | 6.667   23.11 |  9.75   52.83
               0.583    6.35 | 3.667   12.70 | 6.750   23.11 |  9.83   52.83
               0.667    6.35 | 3.750   12.70 | 6.833   23.11 |  9.92   52.83
               0.750    6.35 | 3.833   12.70 | 6.917   23.11 | 10.00   52.83
               0.833    6.35 | 3.917   12.70 | 7.000   23.11 | 10.08   52.83
               0.917    6.35 | 4.000   12.70 | 7.083   23.11 | 10.17   52.83
               1.000    6.35 | 4.083   12.70 | 7.167   23.11 | 10.25   37.85
               1.083    6.35 | 4.167   12.70 | 7.250   12.70 | 10.33   37.85
               1.167    6.35 | 4.250   16.76 | 7.333   12.70 | 10.42   37.85
               1.250    4.32 | 4.333   16.76 | 7.417   12.70 | 10.50   37.85
               1.333    4.32 | 4.417   16.76 | 7.500   12.70 | 10.58   37.85
               1.417    4.32 | 4.500   16.76 | 7.583   12.70 | 10.67   37.85
               1.500    4.32 | 4.583   16.76 | 7.667   12.70 | 10.75   37.85
               1.583    4.32 | 4.667   16.76 | 7.750   12.70 | 10.83   37.85
               1.667    4.32 | 4.750   16.76 | 7.833   12.70 | 10.92   37.85
               1.750    4.32 | 4.833   16.76 | 7.917   12.70 | 11.00   37.85
               1.833    4.32 | 4.917   16.76 | 8.000   12.70 | 11.08   37.85
               1.917    4.32 | 5.000   16.76 | 8.083   12.70 | 11.17   37.85
               2.000    4.32 | 5.083   16.76 | 8.167   12.70 | 11.25   12.70
               2.083    4.32 | 5.167   16.76 | 8.250   12.70 | 11.33   12.70
               2.167    4.32 | 5.250   13.97 | 8.333   12.70 | 11.42   12.70
               2.250    6.35 | 5.333   13.97 | 8.417   12.70 | 11.50   12.70
               2.333    6.35 | 5.417   13.97 | 8.500   12.70 | 11.58   12.70
               2.417    6.35 | 5.500   13.97 | 8.583   12.70 | 11.67   12.70
               2.500    6.35 | 5.583   13.97 | 8.667   12.70 | 11.75   12.70
               2.583    6.35 | 5.667   13.97 | 8.750   12.70 | 11.83   12.70
               2.667    6.35 | 5.750   13.97 | 8.833   12.70 | 11.92   12.70
               2.750    6.35 | 5.833   13.97 | 8.917   12.70 | 12.00   12.70
               2.833    6.35 | 5.917   13.97 | 9.000   12.70 | 12.08   12.70
               2.917    6.35 | 6.000   13.97 | 9.083   12.70 | 12.17   12.70
               3.000    6.35 | 6.083   13.97 | 9.167   12.70 |
               3.083    6.35 | 6.167   13.97 | 9.250   52.83 |

     Unit Hyd Qpeak  (cms)=   2.154

     PEAK FLOW       (cms)=   3.858 (i)
     TIME TO PEAK    (hrs)=  10.500
     RUNOFF VOLUME    (mm)= 190.346
     TOTAL RAINFALL   (mm)= 212.340
     RUNOFF COEFFICIENT   =   0.896

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (******)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (******):    31.02   3.858    10.50   190.35
      + ID2= 2 (******):    52.07   8.362    10.58   195.42
        ================================================
        ID = 3 (******):    83.09  12.204    10.58   193.53

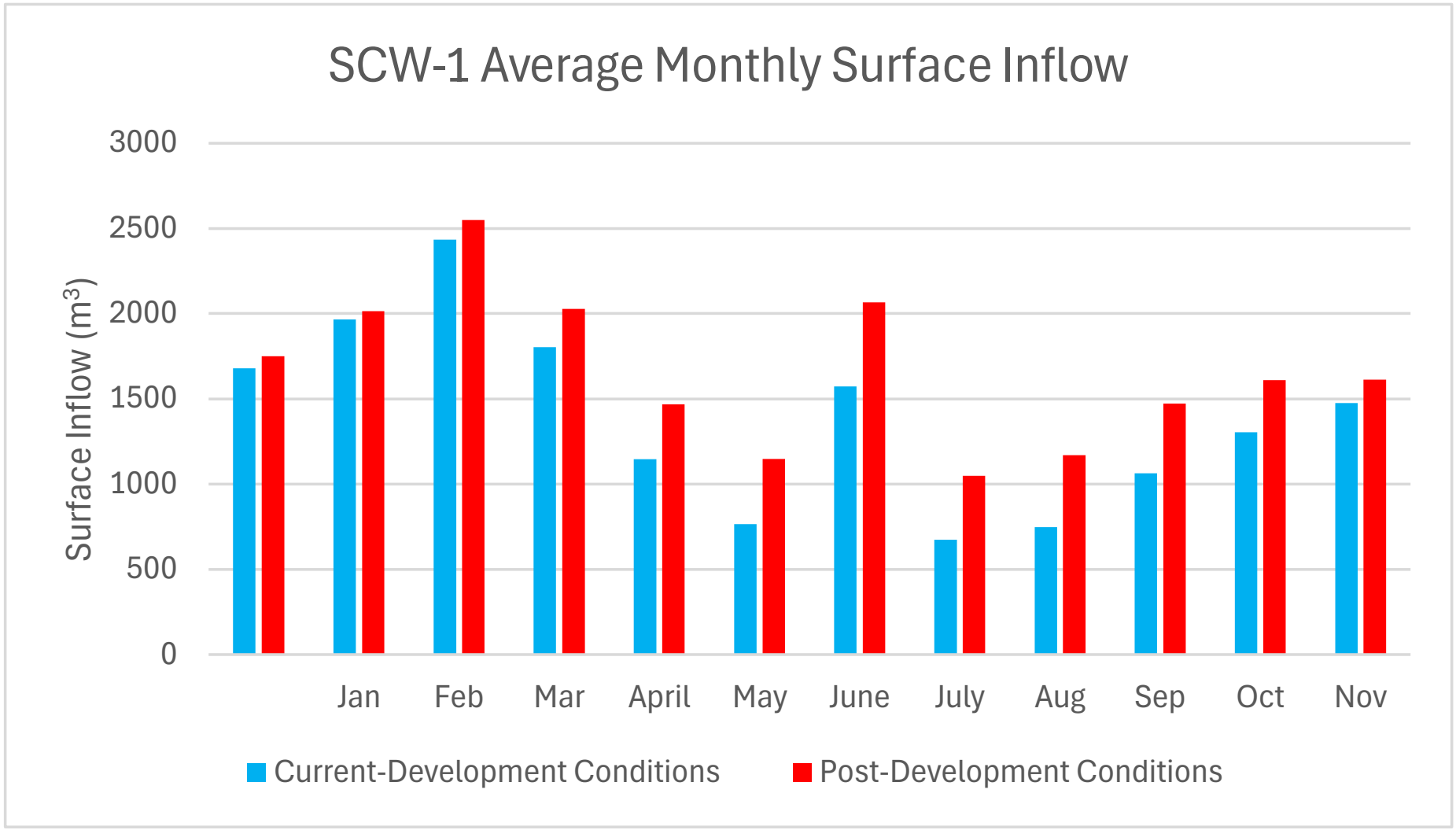
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

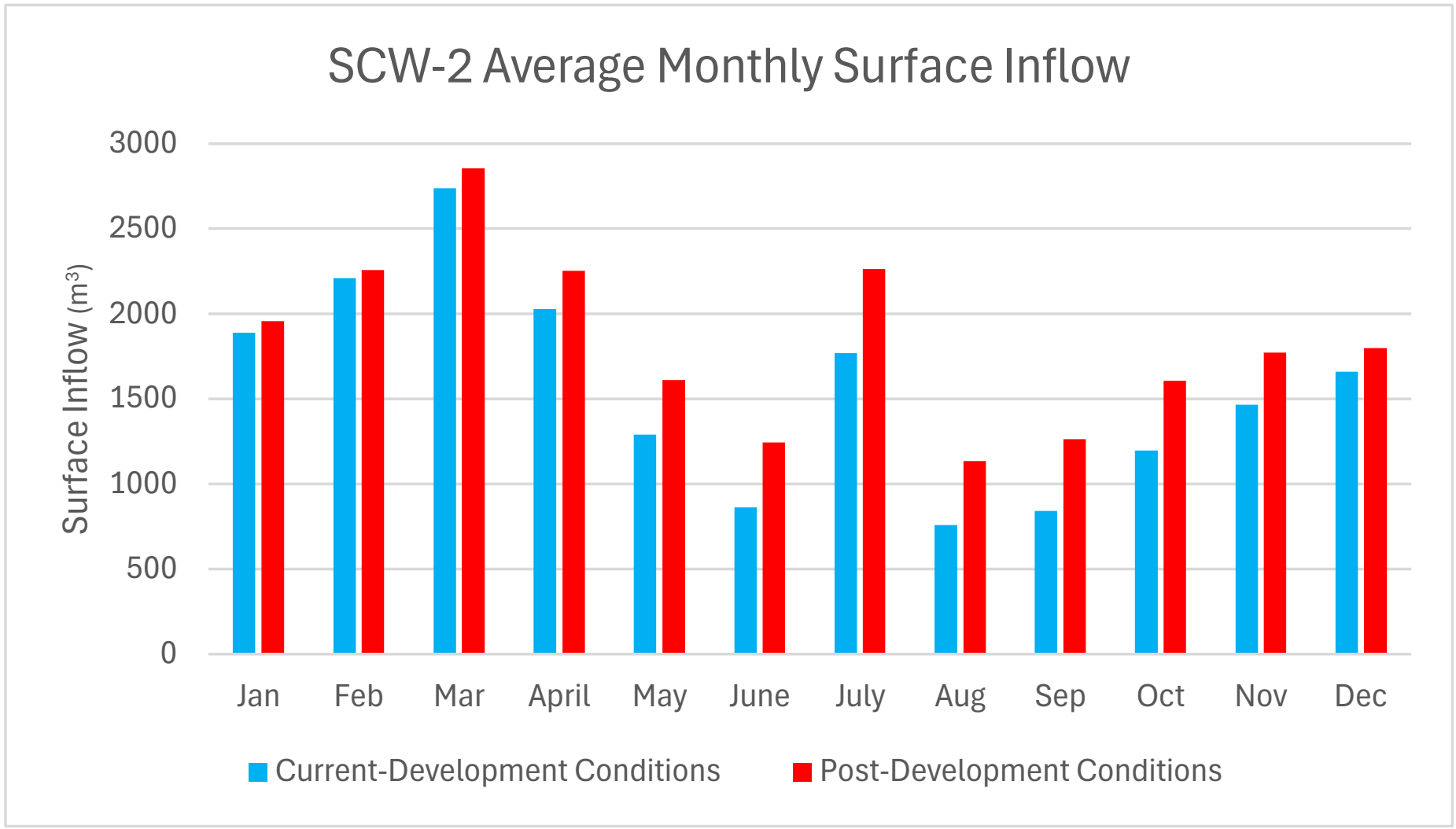
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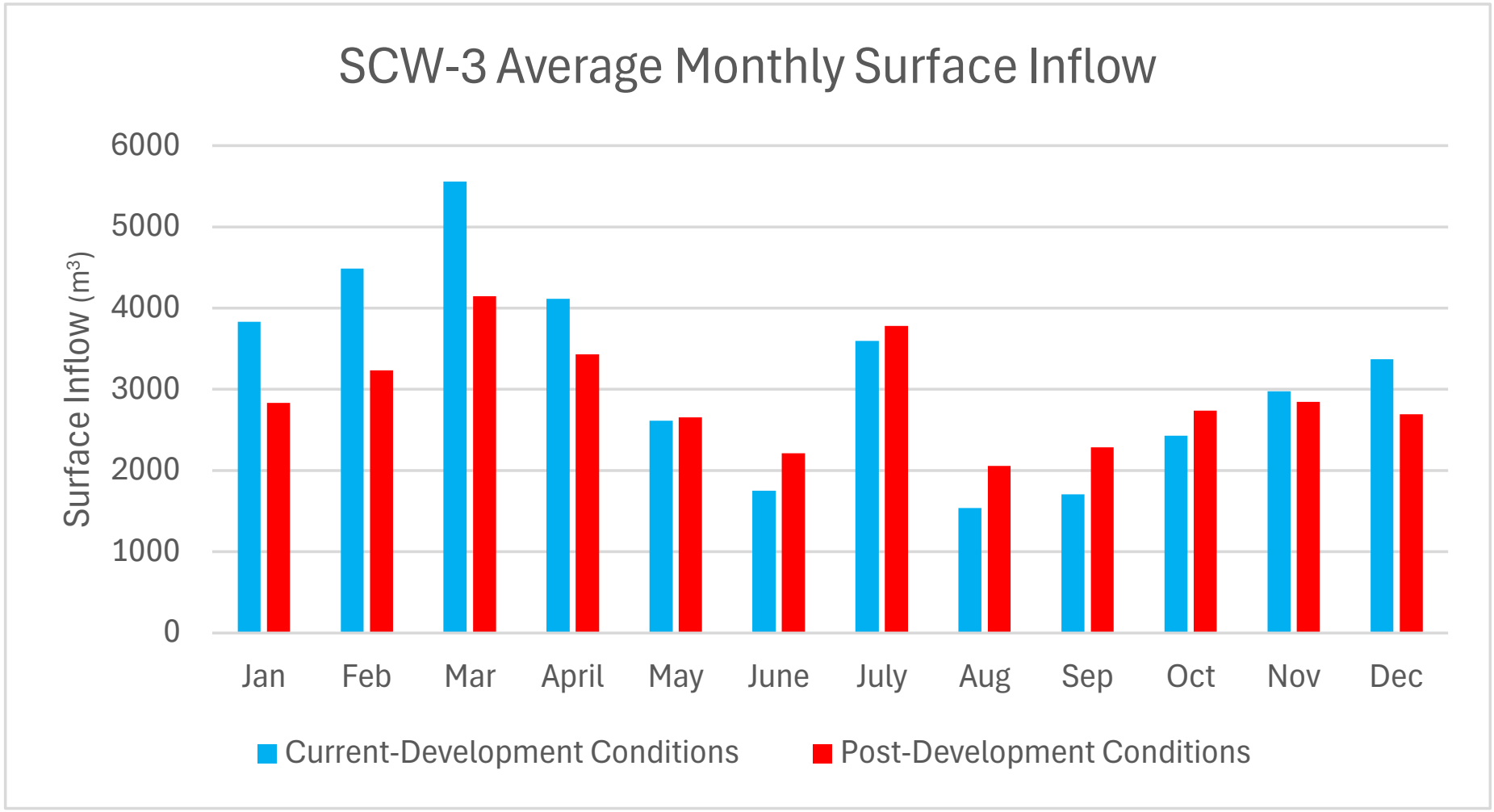
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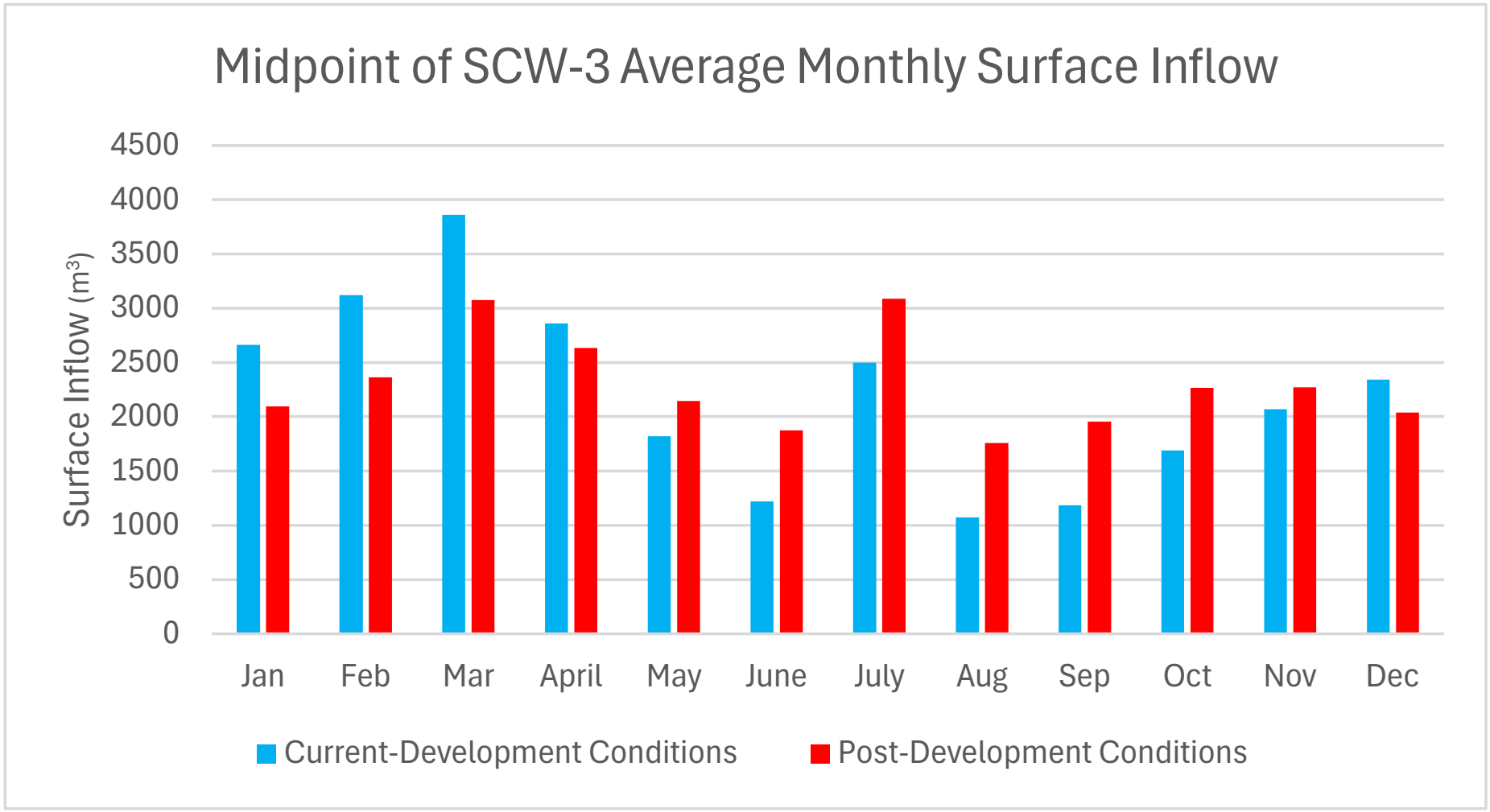
Appendix E

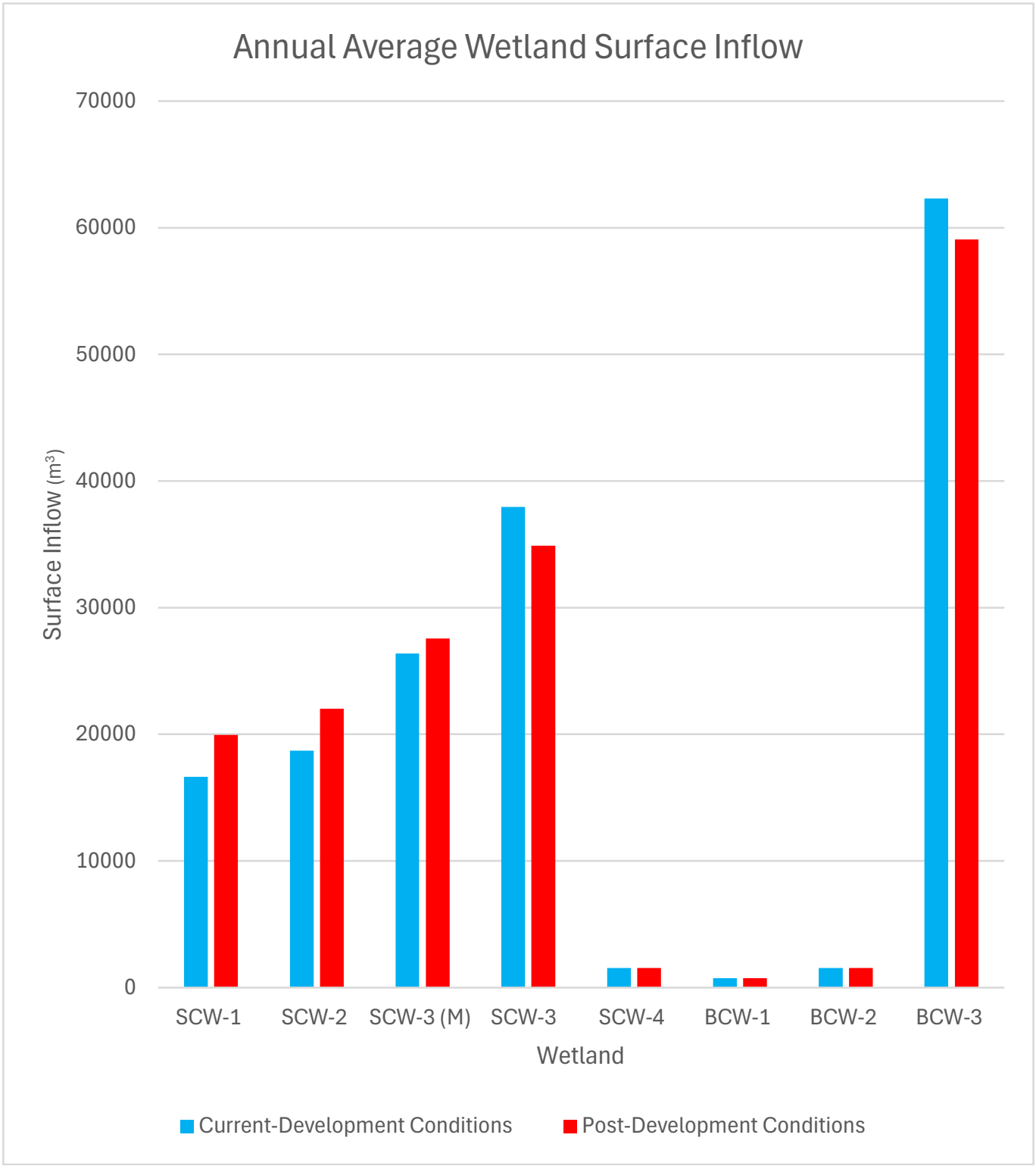
Preliminary Water Budget


SCW-1 Average Monthly Surface Inflow
Surface Inflow (m3)
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
April
May
June
July
Aug
Sep
Oct
Nov
Current-Development Conditions
Post-Development Conditions


SCW-2 Average Monthly Surface Inflow
Surface Inflow (m³)
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
April
May
June
July
Aug
Sep
Oct
Nov
Dec
Current-Development Conditions
Post-Development Conditions


SCW-3 Average Monthly Surface Inflow
Surface Inflow (m³)
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
April
May
June
July
Aug
Sep
Oct
Nov
Dec
Current-Development Conditions
Post-Development Conditions


Midpoint of SCW-3 Average Monthly Surface Inflow
Surface Inflow (m³)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
April
May
June
July
Aug
Sep
Oct
Nov
Dec
Current-Development Conditions
Post-Development Conditions


Annual Average Wetland Surface Inflow
70000
60000
50000
40000
30000
20000
10000
0
Surface Inflow (m³)
SCW-1
SCW-2
SCW-3 (M)
SCW-3
SCW-4
BCW-1
BCW-2
BCW-3
Wetland
Current-Development Conditions
Post-Development Conditions

Drawings

PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

GEOGRAPHIC TOWNSHIP OF NELSON
NOW IN THE

CITY OF BURLINGTON

REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 1750

0 50 100 150 metres

THE INTENDED PLOT SIZE OF THIS PLAN IS 1220mm IN WIDTH BY 915mm IN HEIGHT WHEN PLOTTED AT A SCALE OF 1:1750 (INCLUDING 15mm BEYOND EACH BORDER)

MacKAY, MacKAY & PETERS LIMITED - ONTARIO LAND SURVEYORS

© 2024

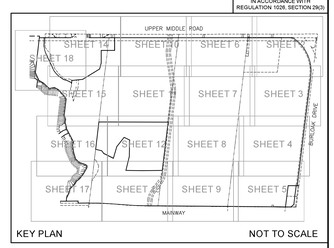
METRIC DISTANCES SHOWN HEREON ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

COLOUR PLAN OF SURVEY CONTAINS COLOUR

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-58243

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR IN ACCORDANCE WITH REGULATION 1026, SECTION 29(3)

KEY PLAN — NOT TO SCALE



BENCHMARK NOTE

CITY OF BURLINGTON BENCHMARK No. 421
ELEVATION = 129.726 m (CGVD2CT8 ADJUSTMENT)

PLAQUE ON SOUTH SIDE OF MAINWAY ON EAST FACE OF CONCRETE HEADWALL 0.1 METRES SOUTH OF NORTHFACE AND 0.02 METRES FROM TOP OF HEADWALL JUST WEST OF HEINE COURT.

BEARING REFERENCE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTH WEST LIMIT OF PART 1 PLAN EX–234 HAVING A BEARING OF N36°58'40"E

LEGEND

- ■ DENOTES A SURVEY MONUMENT FOUND
- □ DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
- SSIB DENOTES SHORT STANDAR IRON BAR
- IB DENOTES IRON BAR
- P1 DENOTES PLAN 20R–10977
- P2 DENOTES PLAN 20M–525
- P3 DENOTES PLAN 20M–721
- P4 DENOTES PLAN EX–234
- P5 DENOTES PLAN EX–125
- P6 DENOTES PLAN 20R–13150
- P7 DENOTES PLAN 20M–671
- P8 DENOTES PLAN 20R–18145
- P9 DENOTES PLAN 20R–7372
- P10 DENOTES PLAN 20M–505
- P11 DENOTES PLAN EX–237
- D1 DENOTES INST. No. 628194
- D2 DENOTES INST. No. H542080
- C1 DENOTES CALCULATED FROM D1 & D2
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- HSC DENOTES HALTON STANDARD CONDOMINIUM
- GM DENOTES GAS MARKER
- RS DENOTES ROAD SIGN
- HH DENOTES HANDHOLE
- TL DENOTES TRAFFIC LIGHT
- TSL DENOTES TRAFFIC LIGHT STANDARD
- FH DENOTES FIRE HYDRANT
- WVC DENOTES WATER VALVE CHAMBER
- BM DENOTES BELL MARKER
- BMH DENOTES BELL MANHOLE
- BP DENOTES BELL PEDESTAL
- BCT DENOTES BELL CELLULAR TOWER
- CB DENOTES CATCHBASIN
- STMH DENOTES STORM MANHOLE
- SNMH DENOTES SANITARY MANHOLE
- WHP DENOTES WOOD HYDRO POLE
- CHP DENOTES CONCRETE HYDRO POLE
- GW DENOTES GUY WIRE
- ULS DENOTES UTILITY LIGHT STANDARD
- OH DENOTES OVERHEAD UTILITIES
- HYT DENOTES HYDRO TOWER
- S.D.S. DENOTES SOUTH OF DUNDAS STREET
- WSV DENOTES WATER SERVICE VALVE
- MHP DENOTES METAL HYDRO POLE
- LP DENOTES LIGHT POLE
- HMH DENOTES HYDRO MANHOLE
- DCB DENOTES DOUBLE CATCH BASIN
- WHV DENOTES WATER HYDRANT VALVE
- WM DENOTES WATER METER
- MW DENOTES MONITORING WELL
- TB DENOTES TEST BOX
- BPV DENOTES BELL PEDESTAL VAULT
- JB DENOTES JUNCTION BOX
- (BTM) DENOTES BOTTOM
- (INV) DENOTES INVERSE
- TOS DENOTES TOP OF SLOPE
- BOS DENOTES BOTTOM OF SLOPE
- BCC DENOTES BACK OF CONCRETE CURB
- CNC DENOTES CONCRETE
- MB DENOTES MAIL BOX
- HT DENOTES HYDRO TRANSFORMER
- RMB DENOTES RURAL MAIL BOX
- STUMP DENOTES STUMP
- DENOTES DECIDUOUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- DENOTES CONIFEROUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- GAS DENOTES GAS MAIN
- FO DENOTES FIBER OPTIC
- MH DENOTES CONCRETE CHAMBER WITH MULTIPLE BELL TELEPHONE LINES
- H DENOTES HYDRO
- OH DENOTES OVERHEAD WIRE
- WM DENOTES WATER MAIN

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

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JUNE 11, 2024
DATE

ROY C. MAYS
ONTARIO LAND SURVEYOR
FOR MACKAY, MACKAY & PETERS LIMITED

E:\2023 Halton\23MPS NELSON\23DSU DGN 21JUST 1, 3, 3, 4\23-015\23-015-PS.dwg

MMP
MacKay, MacKay & Peters Limited
LAND SURVEYORS & MAPPERS
SINCE 1906

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DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED BY:	
PROJECT No.:	SHEET 1/18
	23–015–PS

PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

GEOGRAPHIC TOWNSHIP OF NELSON
NOW IN THE
CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 400

0 5 10 20 40 metres

THE INTENDED PLOT SIZE OF THIS PLAN IS 1220mm IN WIDTH BY 915mm IN HEIGHT WHEN PLOTTED AT A SCALE OF 1:400 (INCLUDING 15mm BEYOND EACH BORDER)

MacKAY, MacKAY & PETERS LIMITED - ONTARIO LAND SURVEYORS

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METRIC *DISTANCES SHOWN HEREON ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048*

COLOUR *PLAN OF SURVEY CONTAINS COLOUR*

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-58243

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY
ISSUED BY THE SURVEYOR
IN ACCORDANCE WITH
REGULATION 1026, SECTION 29(3)



KEY PLAN NOT TO SCALE

BENCHMARK NOTE

CITY OF BURLINGTON BENCHMARK No. 421
ELEVATION = 129.726 m (CGVD28:78 ADJUSTMENT)

PLAQUE ON SOUTH SIDE OF MANWAY ON EAST FACE OF CONCRETE HEADWALL 0.1 METRES SOUTH OF NORTHFACE AND 0.02 METRES FROM TOP OF HEADWALL JUST WEST OF HEINE COURT.

BEARING REFERENCE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTH EAST LIMIT OF PART PLAN EX-234 HAVING A BEARING OF N36°58'40"E

LEGEND

- ■ DENOTES A SURVEY MONUMENT FOUND
- □ DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
- SSIB DENOTES SHORT STANDAR IRON BAR
- IB DENOTES IRON BAR
- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
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- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
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- P10 DENOTES PLAN 20M-505
- P11 DENOTES PLAN EX-237
- D1 DENOTES INST. No. 628194
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- C1 DENOTES CALCULATED FROM D1 & D2
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- HSC DENOTES HALTON STANDARD CONDOMINIUM
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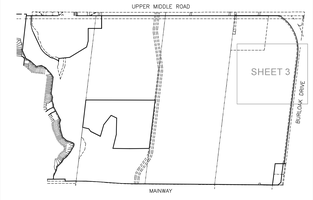
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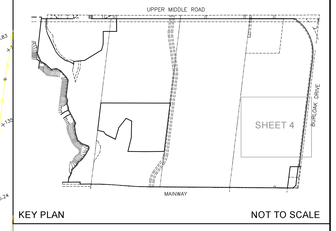
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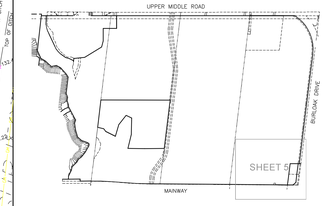
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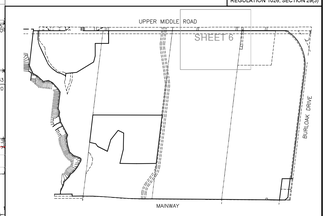
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METRIC *DISTANCES SHOWN HEREON ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048*

COLOUR *PLAN OF SURVEY CONTAINS COLOUR*

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-58243

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY
ISSUED BY THE SURVEYOR IN ACCORDANCE WITH REGULATION 1026, SECTION 29(3)



KEY PLAN NOT TO SCALE

BENCHMARK NOTE

CITY OF BURLINGTON BENCHMARK No. 421
ELEVATION = 129.726 m (CGVD28:78 ADJUSTMENT)

PLAQUE ON SOUTH SIDE OF MAINWAY ON EAST FACE OF CONCRETE HEADWALL 0.1 METRES SOUTH OF NORTHFACE AND 0.02 METRES FROM TOP OF HEADWALL JUST WEST OF HEINE COURT.

BEARING REFERENCE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTH EAST LIMIT OF PART PLAN EX-234 HAVING A BEARING OF N36°58'40"E

LEGEND

- ■ DENOTES A SURVEY MONUMENT FOUND
- □ DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
- SSIB DENOTES SHORT STANDARD IRON BAR
- IB DENOTES IRON BAR
- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
- P8 DENOTES PLAN 20R-18145
- P9 DENOTES PLAN 20R-7372
- P10 DENOTES PLAN 20M-505
- P11 DENOTES PLAN EX-237
- D1 DENOTES INST. No. 628194
- D2 DENOTES INST. No. H542080
- C1 DENOTES CALCULATED FROM D1 & D2
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- HSC DENOTES HALTON STANDARD CONDOMINIUM
- GM DENOTES GAS MARKER
- RS DENOTES ROAD SIGN
- MH DENOTES MANDHOLE
- TL DENOTES TRAFFIC LIGHT
- TSL DENOTES TRAFFIC LIGHT STANDARD
- FH DENOTES FIRE HYDRANT
- WVC DENOTES WATER VALVE CHAMBER
- BM DENOTES BELL MARKER
- BMH DENOTES BELL MANHOLE
- BP DENOTES BELL PEDESTAL
- BCT DENOTES BELL CELLULAR TOWER
- CB DENOTES CATCHBASIN
- STMH DENOTES STORM MANHOLE
- SNMH DENOTES SANITARY MANHOLE
- WHP DENOTES WOOD HYDRO POLE
- CHP DENOTES CONCRETE HYDRO POLE
- GW DENOTES GUY WIRE
- ULS DENOTES UTILITY LIGHT STANDARD
- OH DENOTES OVERHEAD UTILITIES
- HYT DENOTES HYDRO TOWER
- S.D.S. DENOTES SOUTH OF DUNDAS STREET
- WSV DENOTES WATER SERVICE VALVE
- MHP DENOTES METAL HYDRO POLE
- LP DENOTES LIGHT POLE
- HMH DENOTES HYDRO MANHOLE
- DCB DENOTES DOUBLE CATCH BASIN
- WHV DENOTES WATER HYDRANT VALVE
- WM DENOTES WATER METER
- MW DENOTES MONITORING WELL
- TB DENOTES TEST BOX
- BPV DENOTES BELL PEDESTAL VAULT
- JB DENOTES JUNCTION BOX
- (BTM) DENOTES BOTTOM
- (INV) DENOTES INVERSE
- TOS DENOTES TOP OF SLOPE
- BOS DENOTES BOTTOM OF SLOPE
- BCC DENOTES BACK OF CONCRETE CURB
- CONC DENOTES CONCRETE
- MB DENOTES MAIL BOX
- ▽ DENOTES HYDRO TRANSFORMER
- RMB DENOTES RURAL MAIL BOX
- DENOTES STUMP
- DENOTES DECIDUOUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- DENOTES CONIFEROUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- DENOTES GAS MAIN
- FO DENOTES FIBER OPTIC
- DENOTES CONCRETE CHAMBER WITH MULTIPLE BELL TELEPHONE LINES
- H DENOTES HYDRO
- OH DENOTES OVERHEAD WIRE
- W DENOTES WATER MAIN

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

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JUNE 11, 2024
DATE

ROY C. MACKAY
ONTARIO LAND SURVEYOR
FOR MACKAY, MACKAY & PETERS LIMITED

E:\(20) Halton\(MP) NELSON\(505) CON 2\LOT 1, 2, 3, 4\23-015\23-015-PS.dwg

MMP
MacKay, MacKay & Peters Limited
LAND SURVEYORS & MAPPERS
SINCE 1906

3380 South Service Road
Unit 101
Burlington, ON
L7N 3J5
(905)639-1375

halton@mmplimited.com
mmplimited.com

DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED BY:	
PROJECT No.:	SHEET 6/18
	23-015-PS

PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

GEOGRAPHIC TOWNSHIP OF NELSON
NOW IN THE

CITY OF BURLINGTON

REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 400

0 5 10 20 40 metres

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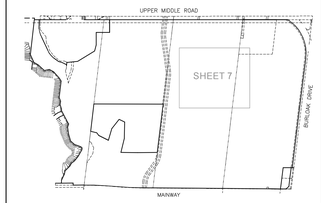
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- SSIB DENOTES SHORT STANDAR IRON BAR
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- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
- P8 DENOTES PLAN 20R-18145
- P9 DENOTES PLAN 20R-7372
- P10 DENOTES PLAN 20M-505
- P11 DENOTES PLAN EX-237
- D1 DENOTES INST. No. 628194
- D2 DENOTES INST. No. H542080
- C1 DENOTES CALCULATED FROM D1 & D2
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- HSC DENOTES HALTON STANDARD CONDOMINIUM
- GM DENOTES GAS MARKER
- RS DENOTES ROAD SIGN
- HH DENOTES HANDHOLE
- TL DENOTES TRAFFIC LIGHT
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- WVC DENOTES WATER VALVE CHAMBER
- BM DENOTES BELL MARKER
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- BP DENOTES BELL PEDESTAL
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SINCE 1908

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halton@mmplimited.com
mmplimited.com

DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED:	
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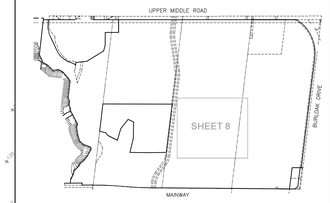
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- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-571
- P8 DENOTES PLAN 20R-18145
- P9 DENOTES PLAN 20R-7372
- P10 DENOTES PLAN 20M-505
- P11 DENOTES PLAN EX-227
- D1 DENOTES INST. No. 628194
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- C1 DENOTES CALCULATED FROM D1 & D2
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DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
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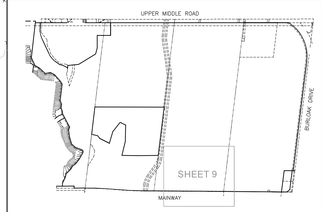
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KEY PLAN NOT TO SCALE

DENSE VEGETATION
TREELINE
EDGE OF FLOWED FIELD
EDGE OF WATER
TOP OF SLOPE
CENTERLINE OF WATER
EDGE OF TRAVELLED ROAD
HYDRO GUYPOLE
SUBJECT TO EASEMENT AS INST. No. H428281
MAINWAY
(DEDICATED BY PLAN 20M--525)

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LEGEND

- ■ DENOTES A SURVEY MONUMENT FOUND
- □ DENOTES A SURVEY MONUMENT PLANTED
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- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
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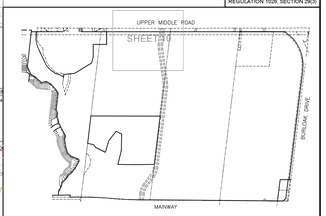
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ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-58243

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY
ISSUED BY THE SURVEYOR
IN ACCORDANCE WITH REGULATION 1026, SECTION 29(3)



KEY PLAN NOT TO SCALE

BENCHMARK NOTE

CITY OF BURLINGTON BENCHMARK No. 421
ELEVATION = 129.726 m (CGVD28:78 ADJUSTMENT)

PLAQUE ON SOUTH SIDE OF MAINWAY ON EAST FACE OF CONCRETE HEADWALL 0.1 METRES SOUTH OF NORTHFACE AND 0.02 METRES FROM TOP OF HEADWALL JUST WEST OF HEINE COURT.

BEARING REFERENCE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTH EAST LIMIT OF PART PLAN EX-234 HAVING A BEARING OF N36°58'40"E

LEGEND

- ■ DENOTES A SURVEY MONUMENT FOUND
- □ DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
- SSIB DENOTES SHORT STANDAR IRON BAR
- IB DENOTES IRON BAR
- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
- P8 DENOTES PLAN 20R-18145
- P9 DENOTES PLAN 20R-7372
- P10 DENOTES PLAN 20M-505
- P11 DENOTES PLAN EX-237
- D1 DENOTES INST. No. 628194
- D2 DENOTES INST. No. HS42080
- C1 DENOTES CALCULATED FROM D1 & D2
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- HSC DENOTES HALTON STANDARD CONDOMINIUM
- GM DENOTES GAS MARKER
- RS DENOTES ROAD SIGN
- HH DENOTES HANDHOLE
- TL DENOTES TRAFFIC LIGHT
- TSL DENOTES TRAFFIC LIGHT STANDARD
- FH DENOTES FIRE HYDRANT
- WVC DENOTES WATER VALVE CHAMBER
- BM DENOTES BELL MARKER
- BMH DENOTES BELL MANHOLE
- BP DENOTES BELL PEDESTAL
- BCT DENOTES BELL CELLULAR TOWER
- CB DENOTES CATCHBASIN
- STMH DENOTES STORM MANHOLE
- SNMH DENOTES SANITARY MANHOLE
- WHP DENOTES WOOD HYDRO POLE
- CHP DENOTES CONCRETE HYDRO POLE
- GW DENOTES GUY WIRE
- ULS DENOTES UTILITY LIGHT STANDARD
- OH DENOTES OVERHEAD UTILITIES
- HYT DENOTES HYDRO TOWER
- S.D.S. DENOTES SOUTH OF DUNDAS STREET
- WSV DENOTES WATER SERVICE VALVE
- MHP DENOTES METAL HYDRO POLE
- LP DENOTES LIGHT POLE
- HMH DENOTES HYDRO MANHOLE
- DCB DENOTES DOUBLE CATCH BASIN
- WHV DENOTES WATER HYDRANT VALVE
- WM DENOTES WATER METER
- MW DENOTES MONITORING WELL
- TB DENOTES TEST BOX
- BPV DENOTES BELL PEDESTAL VAULT
- JB DENOTES JUNCTION BOX
- (BTM) DENOTES BOTTOM
- (INV) DENOTES INVERSE
- TOS DENOTES TOP OF SLOPE
- BOS DENOTES BOTTOM OF SLOPE
- BCC DENOTES BACK OF CONCRETE CURB
- CONC DENOTES CONCRETE
- MB DENOTES MAIL BOX
- HYDRO DENOTES HYDRO TRANSFORMER
- RMB DENOTES RURAL MAIL BOX
- STUMP DENOTES STUMP
- DENOTES DECIDUOUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- DENOTES CONIFEROUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- GAS GAS MAIN
- FO DENOTES FIBER OPTIC
- BT DENOTES CONCRETE CHAMBER WITH MULTIPLE BELL TELEPHONE LINES
- H DENOTES HYDRO
- OH DENOTES OVERHEAD WIRE
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SURVEYOR'S CERTIFICATE

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JUNE 11, 2024
DATE

ROY C. MYDLAK
ONTARIO LAND SURVEYOR
FOR MACKAY, MACKAY & PETERS LIMITED

E:\(20) Halton\(TMP) NELSON\(505) CON 2\LOT 1, 2, 3, 4\23-015\23-015-PS.dwg

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LAND SURVEYORS & MAPPERS
SINCE 1906

3380 South Service Road
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halton@mmplimited.com
mmplimited.com

DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED:	
PROJECT No.:	SHEET 10/18
23-015-PS	

PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

GEOGRAPHIC TOWNSHIP OF NELSON
NOW IN THE
CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 400

5 10 20 40 metres

THE INTENDED PLOT SIZE OF THIS PLAN IS 1220mm IN WIDTH BY 915mm IN HEIGHT WHEN PLOTTED AT A SCALE OF 1:400 (INCLUDING 15mm BEYOND EACH BORDER)

MacKAY, MacKAY & PETERS LIMITED - ONTARIO LAND SURVEYORS

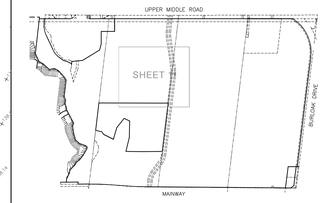
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KEY PLAN NOT TO SCALE

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- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
- P8 DENOTES PLAN 20R-18145
- P9 DENOTES PLAN 20R-7372
- P10 DENOTES PLAN 20M-505
- P11 DENOTES PLAN EX-237
- D1 DENOTES INST. No. 628194
- D2 DENOTES INST. No. H542080
- C1 DENOTES CALCULATED FROM D1 & D2
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- HSC DENOTES HALTON STANDARD CONDOMINIUM
- GM DENOTES GAS MARKER
- RS DENOTES ROAD SIGN
- HH DENOTES HANDHOLE
- TL DENOTES TRAFFIC LIGHT
- TSL DENOTES TRAFFIC LIGHT STANDARD
- FH DENOTES FIRE HYDRANT
- WVC DENOTES WATER VALVE CHAMBER
- BM DENOTES BELL MARKER
- BMH DENOTES BELL MANHOLE
- BP DENOTES BELL PEDESTAL
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- LP DENOTES LIGHT POLE
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- DCB DENOTES DOUBLE CATCH BASIN
- WHV DENOTES WATER HYDRANT VALVE
- WM DENOTES WATER METER
- MW DENOTES MONITORING WELL
- TB DENOTES TEST BOX
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- JB DENOTES JUNCTION BOX
- (BTM) DENOTES BOTTOM
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DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED BY:	
PROJECT No.:	SHEET 11/18
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PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

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SCALE 1 : 400

0 5 10 20 40 metres

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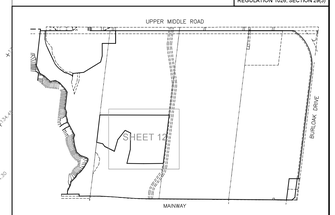
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- SIB DENOTES STANDARD IRON BAR
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- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
- P8 DENOTES PLAN 20R-18145
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- GAS — DENOTES GAS MAIN
- FO — DENOTES FIBER OPTIC
- CT — DENOTES CONCRETE CHAMBER WITH MULTIPLE BELL TELEPHONE LINES
- H — DENOTES HYDRO
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ROY C. MACKAY
ONTARIO LAND SURVEYOR
FOR MACKAY, MACKAY & PETERS LIMITED

E:\2015 Halton\TMP\ 1 NELSON\15DEC CON 2\LOT 1, 2, 3, 4\23-015\23-015-PS.dwg

MMP
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LAND SURVEYORS & MAPPERS
SINCE 1906

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halton@mmplimited.com
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DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED BY:	
PROJECT No.:	SHEET 12/18
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PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

GEOGRAPHIC TOWNSHIP OF NELSON
NOW IN THE

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REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 400

0 5 10 20 40 metres

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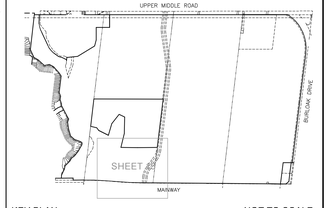
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KEY PLAN NOT TO SCALE

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LEGEND

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- P3 DENOTES PLAN 20M-721
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- P5 DENOTES PLAN EX-125
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DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED BY:	
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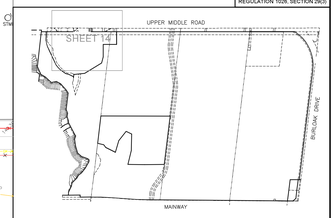
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- □ DENOTES A SURVEY MONUMENT PLANTED
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- SSIB DENOTES SHORT STANDAR IRON BAR
- IB DENOTES IRON BAR
- P1 DENOTES PLAN 20R-10977
- P2 DENOTES PLAN 20M-525
- P3 DENOTES PLAN 20M-721
- P4 DENOTES PLAN EX-234
- P5 DENOTES PLAN EX-125
- P6 DENOTES PLAN 20R-13150
- P7 DENOTES PLAN 20M-671
- P8 DENOTES PLAN 20R-18145
- P9 DENOTES PLAN 20R-7372
- P10 DENOTES PLAN 20M-505
- P11 DENOTES PLAN EX-237
- D1 DENOTES INST. No. 628194
- D2 DENOTES INST. No. H542080
- C1 DENOTES CALCULATED FROM D1 & D2
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- HSC DENOTES HALTON STANDARD CONDOMINIUM
- GM DENOTES GAS MARKER
- RS DENOTES ROAD SIGN
- MH DENOTES MANOHOLE
- TL DENOTES TRAFFIC LIGHT
- TSL DENOTES TRAFFIC LIGHT STANDARD
- FH DENOTES FIRE HYDRANT
- WVC DENOTES WATER VALVE CHAMBER
- BM DENOTES BELL MARKER
- BMH DENOTES BELL MANHOLE
- BP DENOTES BELL PEDESTAL
- BCT DENOTES BELL CELLULAR TOWER
- CB DENOTES CATCHBASIN
- STMH DENOTES STORM MANHOLE
- SNMH DENOTES SANITARY MANHOLE
- WHP DENOTES WOOD HYDRO POLE
- CHP DENOTES CONCRETE HYDRO POLE
- GW DENOTES GUY WIRE
- ULS DENOTES UTILITY LIGHT STANDARD
- OH DENOTES OVERHEAD UTILITIES
- HYT DENOTES HYDRO TOWER
- S.D.S. DENOTES SOUTH OF DUNDAS STREET
- WSV DENOTES WATER SERVICE VALVE
- MHP DENOTES METAL HYDRO POLE
- LP DENOTES LIGHT POLE
- HMH DENOTES HYDRO MANHOLE
- DCB DENOTES DOUBLE CATCH BASIN
- WHV DENOTES WATER HYDRANT VALVE
- WM DENOTES WATER METER
- MW DENOTES MONITORING WELL
- TB DENOTES TEST BOX
- BPV DENOTES BELL PEDESTAL VAULT
- JB DENOTES JUNCTION BOX
- (BTM) DENOTES BOTTOM
- (INV) DENOTES INVERSE
- TOS DENOTES TOP OF SLOPE
- BOS DENOTES BOTTOM OF SLOPE
- BCC DENOTES BACK OF CONCRETE CURB
- CONC DENOTES CONCRETE
- MB DENOTES MAIL BOX
- HYDRO DENOTES HYDRO TRANSFORMER
- RMB DENOTES RURAL MAIL BOX
- STUMP DENOTES STUMP
- DENOTES DECIDUOUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
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- GAS DENOTES GAS MAIN
- FO DENOTES FIBER OPTIC
- MH DENOTES CONCRETE CHAMBER WITH MULTIPLE BELL TELEPHONE LINES
- H DENOTES HYDRO
- OH DENOTES OVERHEAD WIRE
- WM DENOTES WATER MAIN

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:

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2. THE SURVEY WAS COMPLETED ON THE 10th DAY OF MAY, 2024.

JUNE 11, 2024
DATE

ROY K. MAYO
ONTARIO LAND SURVEYOR
FOR MACKAY, MACKAY & PETERS LIMITED

E:\(20) Halton\(TMP) NELSON\(500) CON 2\LOT 1, 2, 3, 4\23-015\23-015-PS.dwg

MMP
MacKay, MacKay & Peters Limited
LAND SURVEYORS & MAPPERS
SINCE 1906

3380 South Service Road
Suite 100
Burlington, ON
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(905) 639-1375

halton@mmplimited.com
mmplimited.com

DRAWN BY: K.J.D.
PARTY CHIEF: A.C.
CHECKED BY:
PROJECT No.: SHEET 14/18
23-015-PS

PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

GEOGRAPHIC TOWNSHIP OF NELSON
NOW IN THE

CITY OF BURLINGTON

REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 400

0 5 10 20 40 metres

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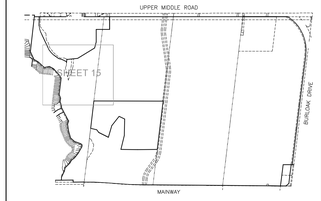
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METRIC DISTANCES SHOWN HEREON ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

COLOUR PLAN OF SURVEY CONTAINS COLOUR

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-58243

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ISSUED BY THE SURVEYOR
IN ACCORDANCE WITH REGULATION 1026, SECTION 29(3)



KEY PLAN NOT TO SCALE

BENCHMARK NOTE

CITY OF BURLINGTON BENCHMARK No. 421
ELEVATION = 129.726 m (CGVD28:78 ADJUSTMENT)

PLAQUE ON SOUTH SIDE OF MAINWAY ON EAST FACE OF CONCRETE HEADWALL 0.1 METRES SOUTH OF NORTHFACE AND 0.02 METRES FROM TOP OF HEADWALL JUST WEST OF HEINE COURT.

BEARING REFERENCE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTH EAST LIMIT OF PART PLAN EX-234 HAVING A BEARING OF N36°58'40"E.

LEGEND

- ■ DENOTES A SURVEY MONUMENT FOUND
- □ DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
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DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED:	R.M.
PROJECT No.:	SHEET 15/18
	23-015-PS

PLAN OF SURVEY OF
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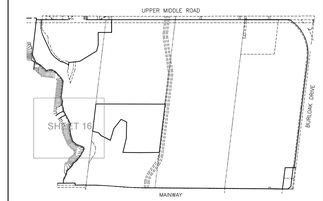
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ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-58243

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KEY PLAN NOT TO SCALE

BENCHMARK NOTE

CITY OF BURLINGTON BENCHMARK No. 421
ELEVATION = 129.726 m (CGVD2013 ADJUSTMENT)

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- □ DENOTES A SURVEY MONUMENT PLANTED
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JUNE 11, 2024
DATE

ROY C. MAY
ONTARIO LAND SURVEYOR
FOR MACKAY, MACKAY & PETERS LIMITED

E:\1201 Halton\WP\ 1613061\SDG\ DGN 2\LOT 1, 2, 3, 4\23-015\23-015-PS.dwg

MMP
Mackay, Mackay & Peters Limited
LAND SURVEYORS & MAPPERS
SINCE 1906

3380 South Service Road
Unit 103
Burlington, ON
L7N 3J5
(905) 639-1375

halton@mmplimited.com
mmplimited.com

DRAWN BY: K.J.D.
PARTY CHIEF: A.C.
CHECKED BY:
PROJECT No.: SHEET 16/18
23-015-PS

PLAN OF SURVEY OF
WITH TOPOGRAPHIC FEATURES
PART OF

LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.

GEOGRAPHIC TOWNSHIP OF NELSON
NOW IN THE
CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 400

5 10 20 40 metres

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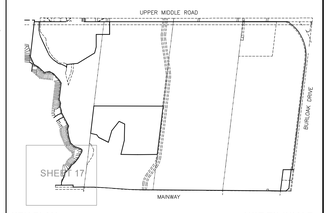
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COLOUR *PLAN OF SURVEY CONTAINS COLOUR*

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
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KEY PLAN NOT TO SCALE

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BEARING REFERENCE

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LEGEND

- ■ DENOTES A SURVEY MONUMENT FOUND
- □ DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
- SSIB DENOTES SHORT STANDAR IRON BAR
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DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED BY:	RCM
PROJECT No.	SHEET 17/18
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PLAN OF SURVEY OF
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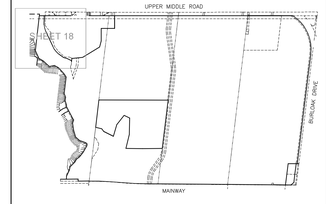
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- WVC DENOTES WATER VALVE CHAMBER
- BM DENOTES BELL MARKER
- BMH DENOTES BELL MANHOLE
- BP DENOTES BELL PEDESTAL
- BCT DENOTES BELL CELLULAR TOWER
- CB DENOTES CATCHBASIN
- STMH DENOTES STORM MANHOLE
- SNMH DENOTES SANITARY MANHOLE
- WHP DENOTES WOOD HYDRO POLE
- CHP DENOTES CONCRETE HYDRO POLE
- GW DENOTES GUY WIRE
- ULS DENOTES UTILITY LIGHT STANDARD
- OH DENOTES OVERHEAD UTILITIES
- HYT DENOTES HYDRO TOWER
- S.D.S. DENOTES SOUTH OF DUNDAS STREET
- WSV DENOTES WATER SERVICE VALVE
- MHP DENOTES METAL HYDRO POLE
- LP DENOTES LIGHT POLE
- HMH DENOTES HYDRO MANHOLE
- DCB DENOTES DOUBLE CATCH BASIN
- WHY DENOTES WATER HYDRANT VALVE
- WM DENOTES WATER METER
- MW DENOTES MONITORING WELL
- TB DENOTES TEST BOX
- BPV DENOTES BELL PEDESTAL VAULT
- JB DENOTES JUNCTION BOX
- (BTM) DENOTES BOTTOM
- (INV) DENOTES INVERSE
- TOS DENOTES TOP OF SLOPE
- BOS DENOTES BOTTOM OF SLOPE
- BCC DENOTES BACK OF CONCRETE CURB
- CONC DENOTES CONCRETE
- MB DENOTES MAIL BOX
- DENOTES HYDRO TRANSFORMER
- DENOTES RURAL MAIL BOX
- DENOTES STUMP
- DENOTES DECIDUOUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- DENOTES CONIFEROUS TREE SCALED TO CANOPY TRUNK SIZE SHOWN IN METRES
- DENOTES GAS MAIN
- DENOTES FIBER OPTIC
- DENOTES CONCRETE CHAMBER WITH MULTIPLE BELL TELEPHONE LINES
- DENOTES HYDRO
- DENOTES OVERHEAD WIRE
- DENOTES WATER MAIN

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 10th DAY OF MAY, 2024.

JUNE 11, 2024
DATE

ROY G. MAND
ONTARIO LAND SURVEYOR
FOR MACKAY, MACKAY & PETERS LIMITED

E:\(20) Halton\(WP) NELSON\(505) CON 2\LOT 1, 2, 3, 4\23-015\23-015-PS.dwg

MMP
MacKay, MacKay & Peters Limited
LAND SURVEYORS & MAPPERS
SINCE 1906

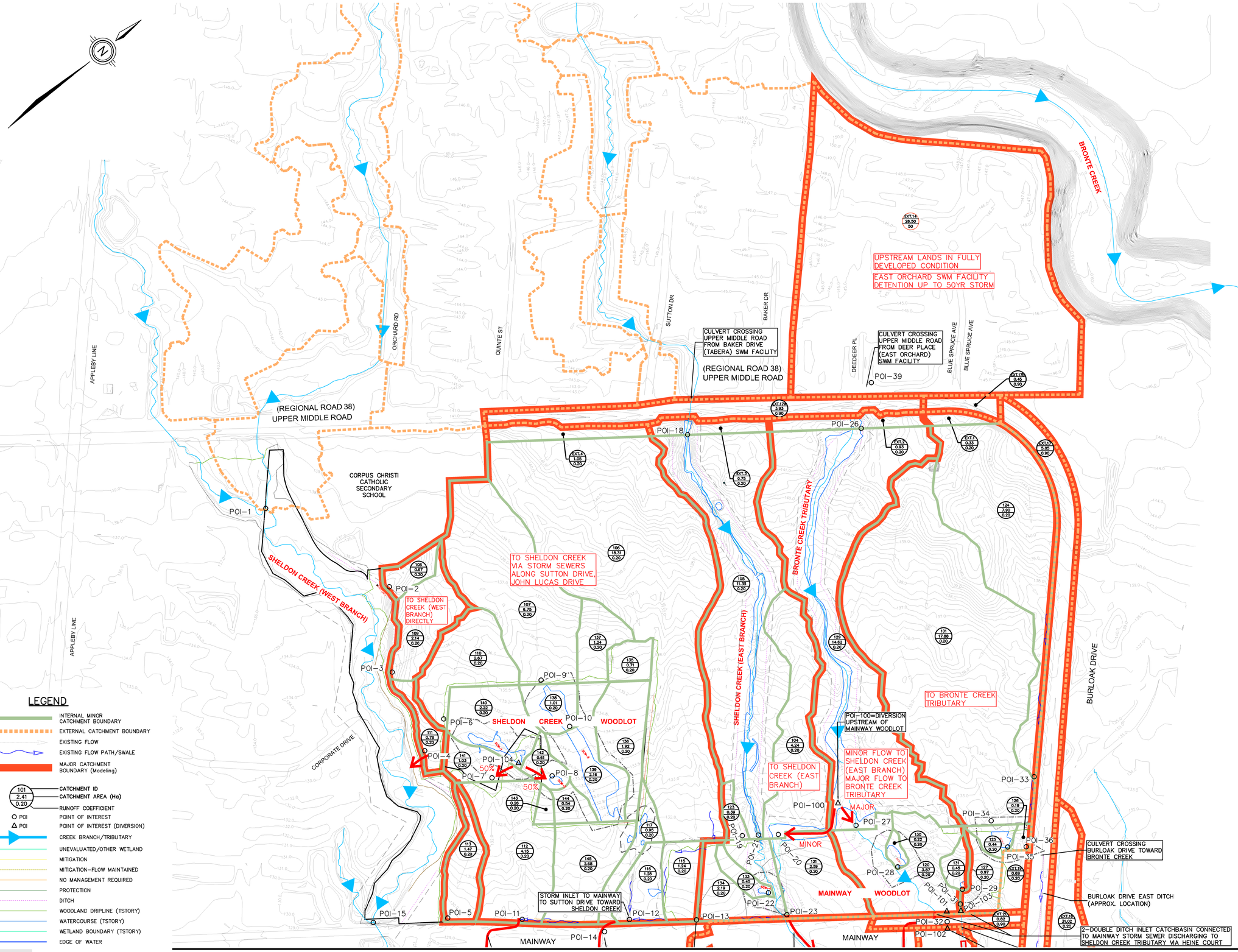
3380 South Service Road
Unit 101
Burlington, ON
L7N 3M6
(905)639-1375

halton@mmplimited.com
mmplimited.com

DRAWN BY:	K.J.D.
PARTY CHIEF:	A.C.
CHECKED:	
PROJECT No.:	SHEET 18/18
	23-015-PS

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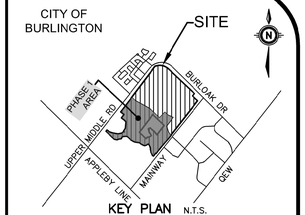
February 20, 2026 - 1:58:11 PM - Plotted By: Danny Pham



LEGEND

- INTERNAL MINOR CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- EXISTING FLOW
- EXISTING FLOW PATH/SWALE
- MAJOR CATCHMENT BOUNDARY (Modeling)
- 101 / 2.41 / 0.20 — CATCHMENT ID / CATCHMENT AREA (Ha) / RUNOFF COEFFICIENT
- POI — POINT OF INTEREST
- POI — POINT OF INTEREST (DIVERSION)
- CREEK BRANCH/TRIBUTARY
- UNEVALUATED/OTHER WETLAND
- MITIGATION
- MITIGATION-FLOW MAINTAINED
- NO MANAGEMENT REQUIRED
- PROTECTION
- DITCH
- WOODLAND DRIPLINE (TSTORY)
- WATERCOURSE (TSTORY)
- WETLAND BOUNDARY (TSTORY)
- EDGE OF WATER
- FUTURE PHASE
- 30m WETLAND REGULATORY LIMIT
- 15m COMBINED NHS REGULATORY LIMIT

SEE DRAWING # EST1.1.2



NOTE TO CONTRACTOR :

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PRE-DEVELOPMENT MODELING

EXISTING CONDITIONS CIRCA 2025 (INCLUDING REDIRECTION OF MINOR FLOW FROM BRONTE CREEK TRIBUTARY TO SHELDON CREEK EAST BRANCH)

No.	REVISION	BY	YYYY-MM-DD
8.			
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3.			
2.	ISSUED FOR PHASE 1 DRAFT PLAN APPROVAL	KRR	2026-02-20
1.	ISSUED FOR PHASE 1 DRAFT PLAN APPROVAL	KRR	2025-10-02

MTE
Engineers, Scientists, Surveyors
905-639-2552

NOT FOR CONSTRUCTION

CLIENT
ALINEA LAND CORPORATION
4480 PALETTA COURT BURLINGTON, ON

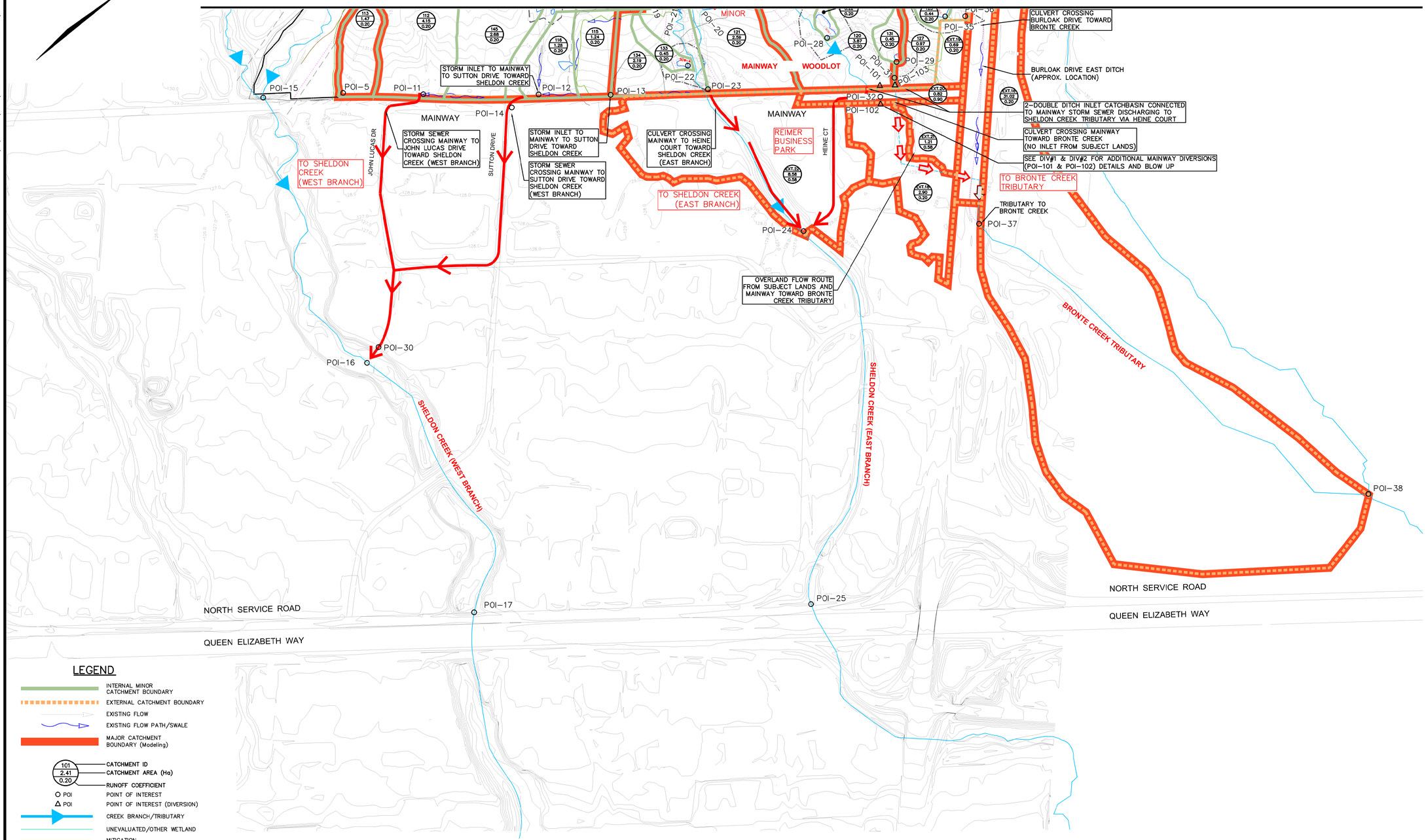
PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

DRAWING
PRE-DEVELOPMENT CATCHMENT AREAS CURRENT CONDITION PLAN No. 1

Project Manager	R.MELICK	Project No.	52982-104
Design By	DXP	Checked By	RSM
Drawn By	SDU	Checked By	RSM
Surveyed By	OTHERS	Drawing No.	EST1.1.1
Date	Apr.09/25		
Scale	1:3500	Sheet 11 of 21	

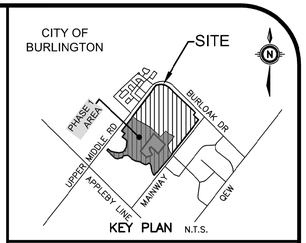
MTE FILE PATH: P:\P\52982\104\52982-104-P-EST1 (MODELING)

SEE DRAWING # EST1.1.1



LEGEND

- INTERNAL MINOR CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- EXISTING FLOW
- EXISTING FLOW PATH/SWALE
- MAJOR CATCHMENT BOUNDARY (Modeling)
- 101 / 2.41 / 0.20 — CATCHMENT ID / CATCHMENT AREA (Ha) / RUNOFF COEFFICIENT
- POI — POINT OF INTEREST
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- MITIGATION–FLOW MAINTAINED
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- WETLAND BOUNDARY (TSTORY)
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KEY PLAN N.T.S.

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PRE-DEVELOPMENT MODELING

EXISTING CONDITIONS CIRCA 2025 (INCLUDING REDIRECTION OF MINOR FLOW FROM BRONTE CREEK TRIBUTARY TO SHELDON CREEK EAST BRANCH)

No.	REVISION	BY	YYYY-MM-DD
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1.	ISSUED FOR PHASE 1 DRAFT PLAN APPROVAL	KRR	2025-10-02

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ALINEA LAND CORPORATION
4480 PALETTA COURT BURLINGTON, ON

PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

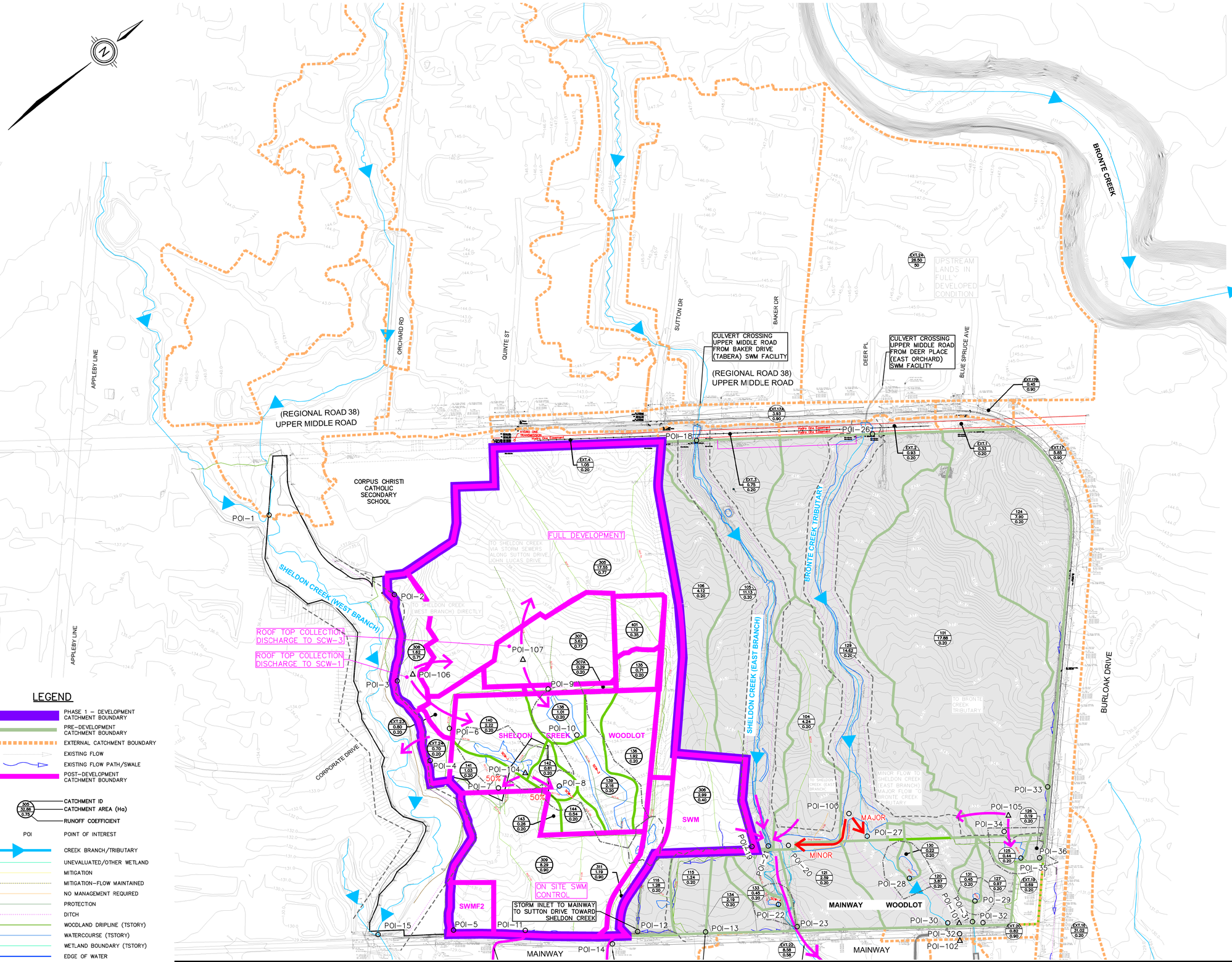
DRAWING
PRE-DEVELOPMENT CATCHMENT AREAS CURRENT CONDITION PLAN No. 2

Project Manager: R.MELICK	Project No.: 52982-104
Design By: DXP	Checked By: RSM
Drawn By: SDU	Checked By: RSM
Surveyed By: OTHERS	Drawing No.: EST1.1.2
Date: Apr.09/25	
Scale: 1:3500	Sheet 12 of 21

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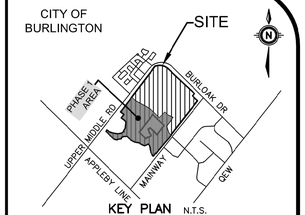
February 20, 2026 - 1:51:59 PM - Plotted By: Danny Pham



LEGEND

- PHASE 1 – DEVELOPMENT CATCHMENT BOUNDARY
- PRE-DEVELOPMENT CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- EXISTING FLOW
- EXISTING FLOW PATH/SWALE
- POST-DEVELOPMENT CATCHMENT BOUNDARY
- CATCHMENT ID
- CATCHMENT AREA (Ha)
- RUNOFF COEFFICIENT
- POI — POINT OF INTEREST
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- WETLAND BOUNDARY (TSTORY)
- EDGE OF WATER
- FUTURE PHASE
- 30m WETLAND REGULATORY LIMIT
- 15m COMBINED NHS REGULATORY LIMIT

SEE DRAWING # EST1.4.2



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PRE-DEVELOPMENT MODELING SCENARIO A

EXISTING CONDITIONS CIRCA 2025 (INCLUDING REDIRECTION OF MINOR FLOW FROM BRONTE CREEK TRIBUTARY TO SHELDON CREEK EAST BRANCH)

No.	REVISION	BY	YYYY-MM-DD
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1.	ISSUED FOR PHASE 1 DRAFT PLAN APPROVAL	KRR	2025-10-02

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ALINEA LAND CORPORATION
4480 PALETTA COURT BURLINGTON, ON

PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

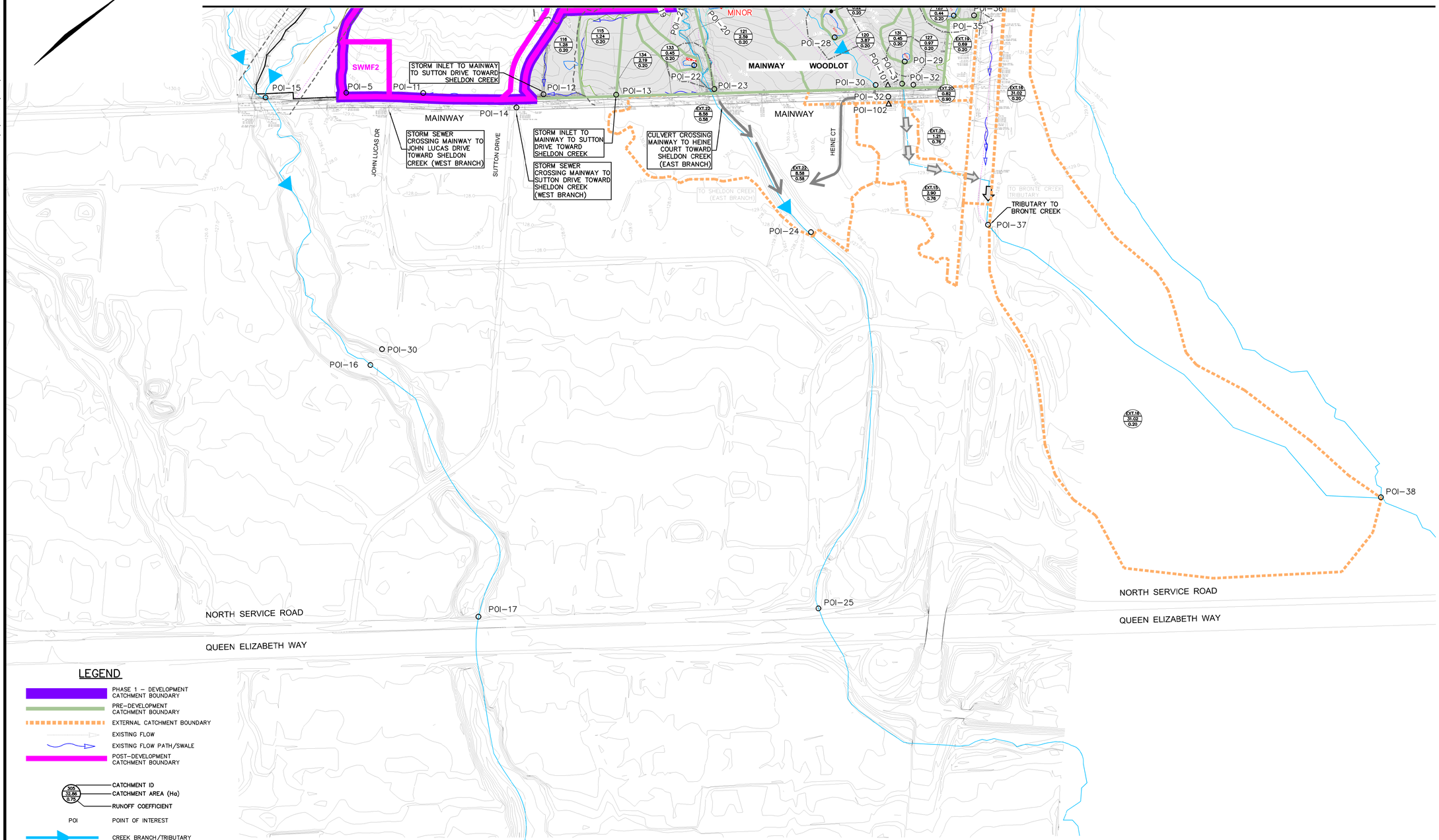
DRAWING
PHASE 1 - DEVELOPMENT CATCHMENT AREAS PLAN No. 1

Project Manager R.MELICK	Project No. 52982-104
Design By DXP	Checked By RSM
Drawn By SDU	Checked By RSM
Surveyed By OTHERS	Drawing No. EST1.4.1
Date Aug.13/25	
Scale 1:3500	Sheet 13 of 21

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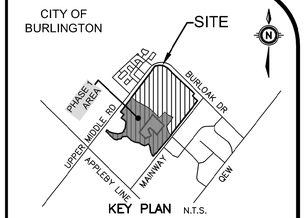
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SEE DRAWING # EST1.4.1



LEGEND

- PHASE 1 – DEVELOPMENT CATCHMENT BOUNDARY
- PRE-DEVELOPMENT CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- EXISTING FLOW
- EXISTING FLOW PATH/SWALE
- POST-DEVELOPMENT CATCHMENT BOUNDARY
- 305 / 32.66 / 0.75 — CATCHMENT ID / CATCHMENT AREA (Ha) / RUNOFF COEFFICIENT
- POI — POINT OF INTEREST
- CREEK BRANCH/TRIBUTARY
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- MITIGATION-FLOW MAINTAINED
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1.	ISSUED FOR PHASE 1 DRAFT PLAN APPROVAL	KRR	2025-10-02

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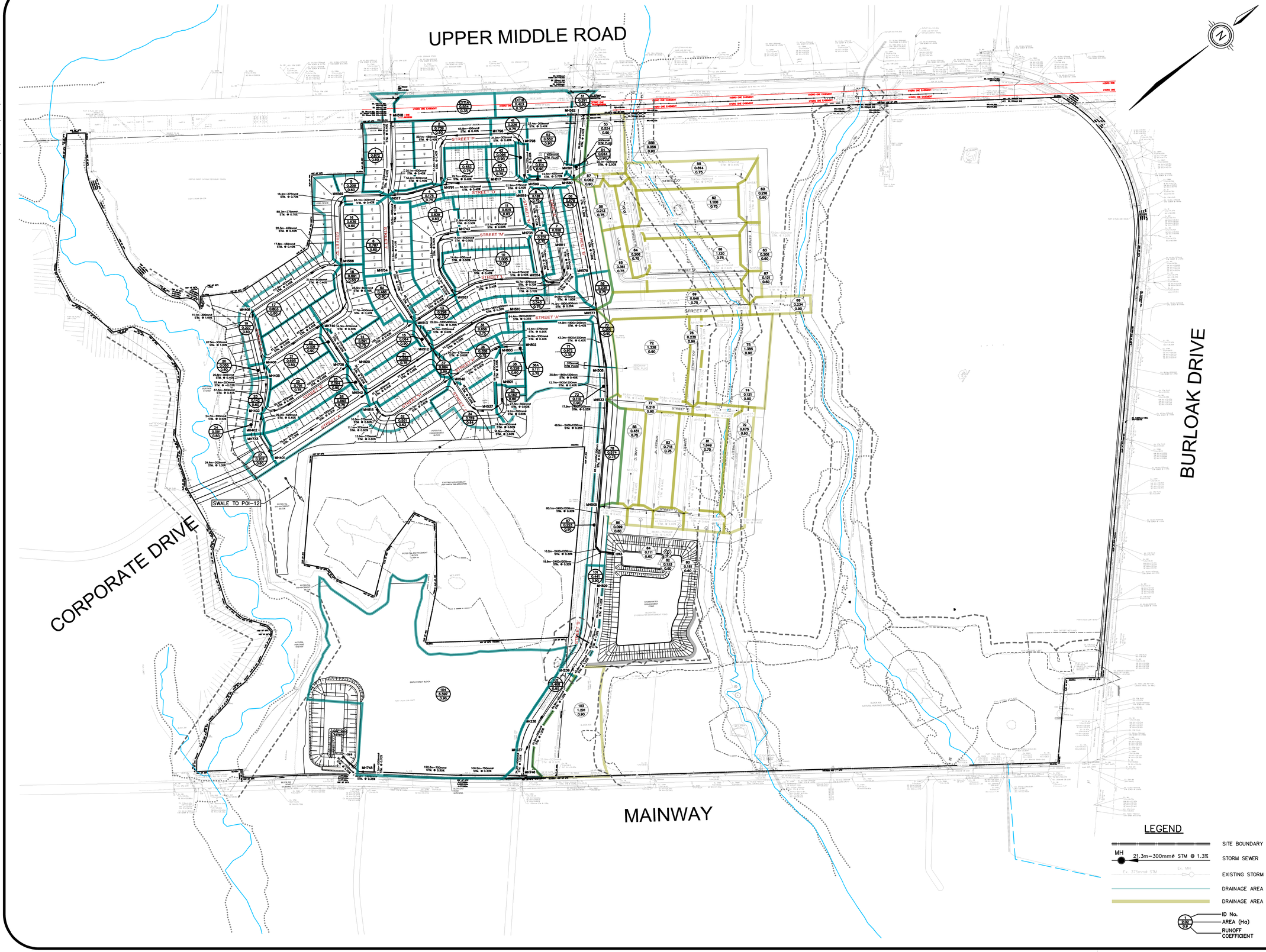
NOT FOR CONSTRUCTION

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ALINEA LAND CORPORATION
4480 PALETTA COURT BURLINGTON, ON

PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

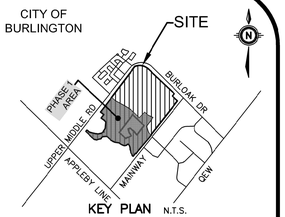
DRAWING
PHASE 1 - DEVELOPMENT CATCHMENT AREAS PLAN No. 2

Project Manager: R.MELICK	Project No.: 52982-104
Design By: DXP	Checked By: RSM
Drawn By: SDU	Checked By: RSM
Surveyed By: OTHERS	Drawing No.: EST1.4.2
Date: Aug.13/25	
Scale: 1:3500	Sheet 14 of 21



CITY OF BURLINGTON

SITE



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4480 PALETTA COURT BURLINGTON, ON

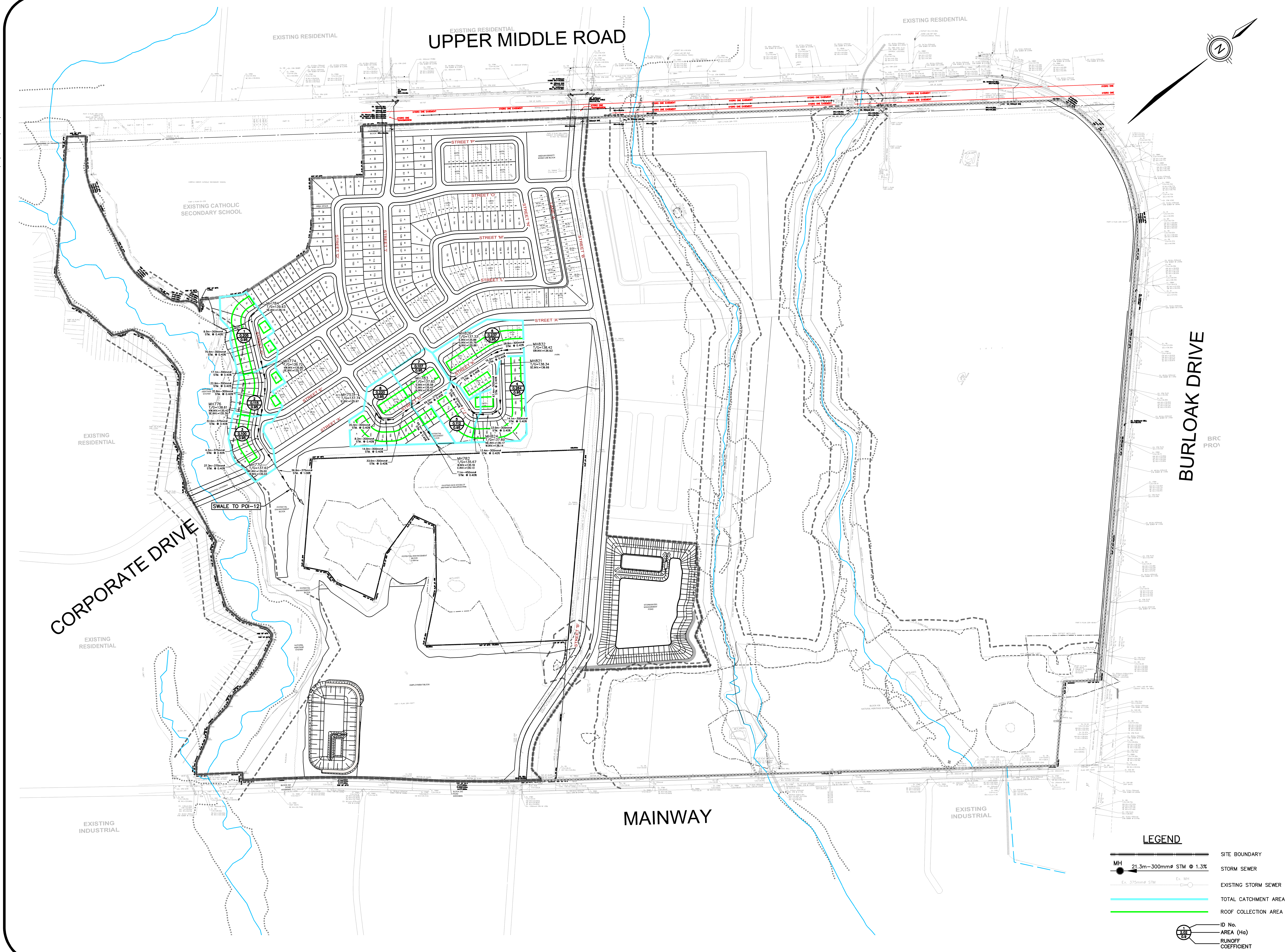
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MAINWAY & BURLOAK DRIVE BURLINGTON, ON

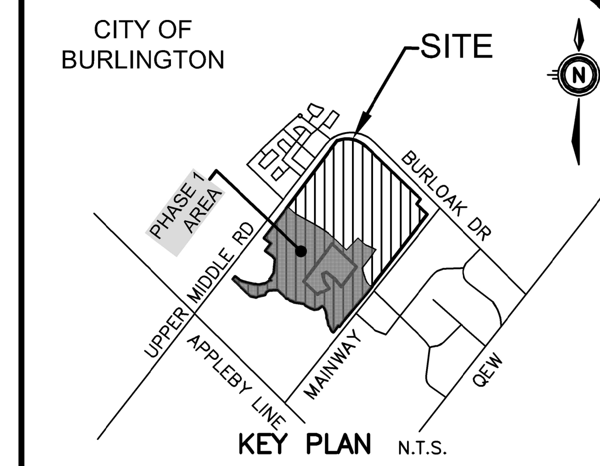
DRAWING
STORM DRAINAGE AREA PLAN No. 1

Project Manager R.MELICK	Project No. 52982-104
Design By CKM	Checked By RSM
Drawn By CKM	Checked By RSM
Surveyed By OTHERS	Drawing No. ST1.1
Date Feb.28/24	
Scale 1:2500	Sheet 16 of 21

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MTE FILE PATH:
February 20, 2026 – 2:04:48 PM – Plotted By: Danny Pham





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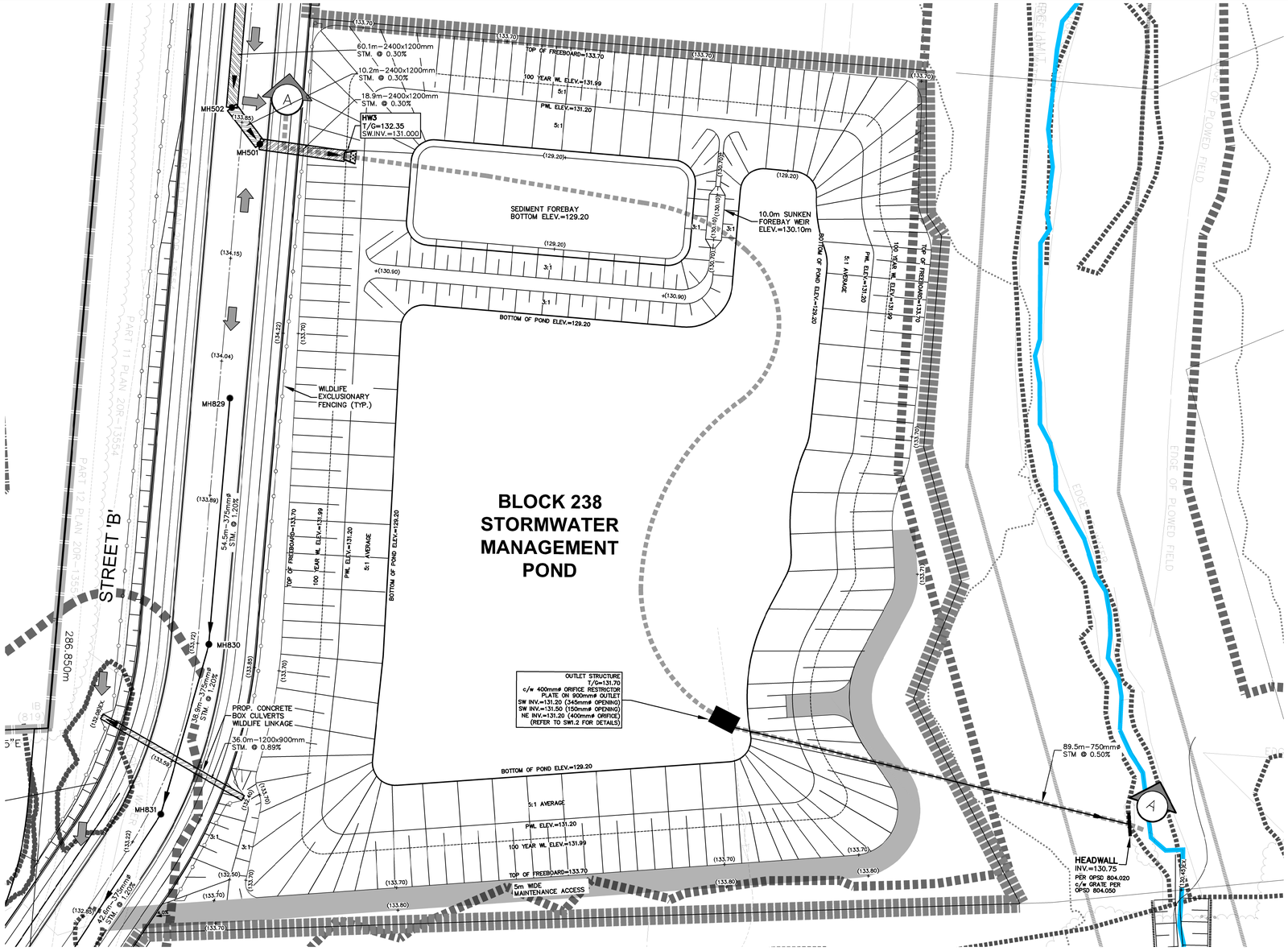
PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

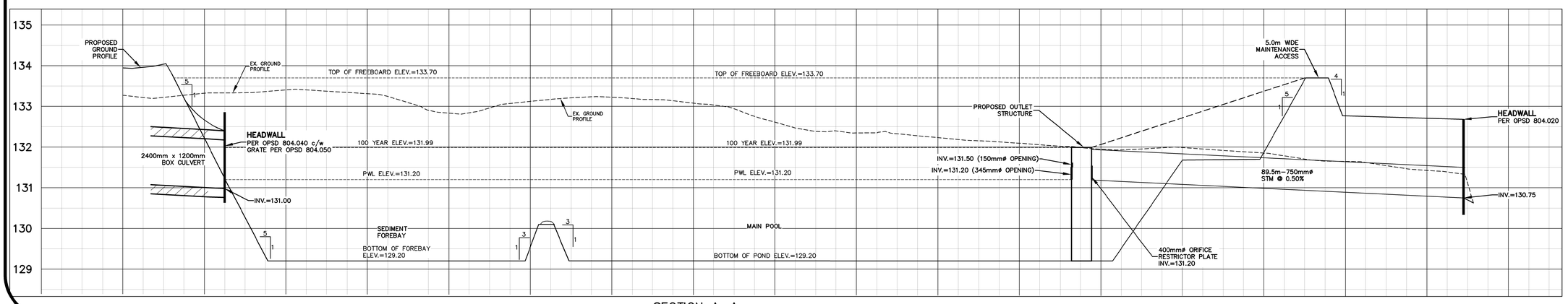
DRAWING
STORM DRAINAGE AREA PLAN No. 2
ROOF COLLECTION

Project Manager: R.MELICK	Project No.: 52982-104
Design By: CKM	Checked By: RSM
Drawn By: CKM	Checked By: RSM
Surveyed By: OTHERS	Drawing No.: ST1.2
Date: Feb.28/24	
Scale: 1:2500	Sheet 17 of 21

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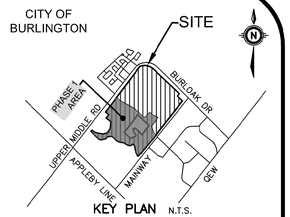
February 20, 2026 - 1:54:50 PM - Plotted By: Chirag Maniya





SECTION A-A 1:500H 1:50V

CITY OF BURLINGTON



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MTE
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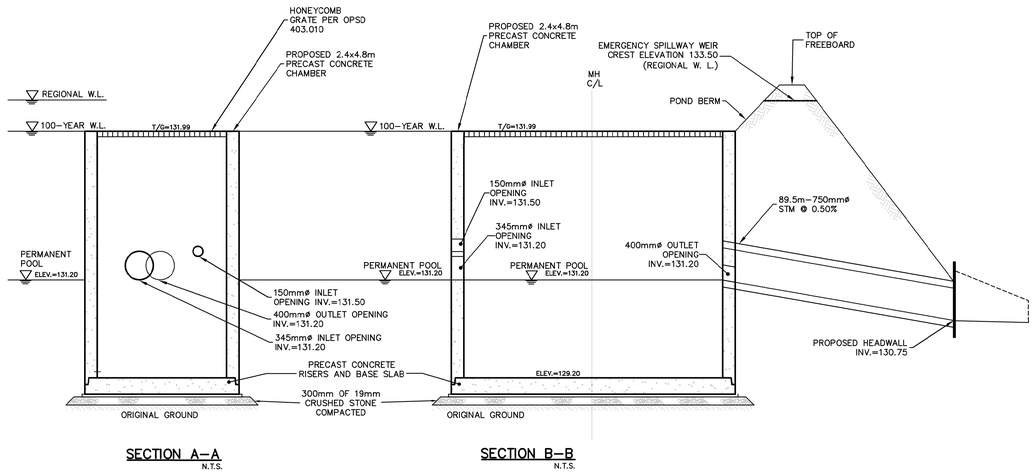
NOT FOR CONSTRUCTION

CLIENT
ALINEA LAND CORPORATION
4480 PALETTA COURT BURLINGTON, ON

PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

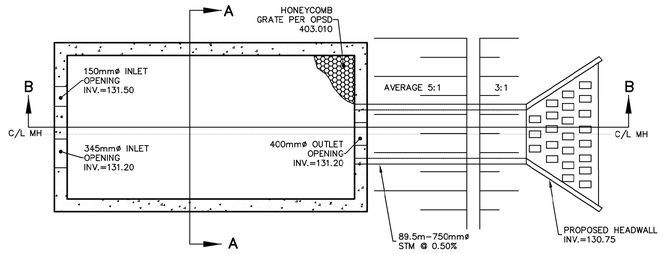
DRAWING
SWM FACILITY POND 1 PLAN

Project Manager: R.MELICK	Project No.: 52982-104
Design By: DXP	Checked By: RSM
Drawn By: CKM	Checked By: RSM
Surveyed By: OTHERS	Drawing No.: SW1.1
Date: May.29/24	
Scale: 1:500	Sheet of

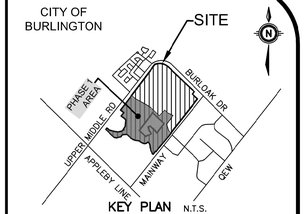


SECTION A-A
N.T.S.

SECTION B-B
N.T.S.



OUTLET STRUCTURE
N.T.S.



KEY PLAN N.T.S.

NOTE TO CONTRACTOR :

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No.	REVISION	BY	YYYY-MM-DD
8.			
7.			
6.			
5.			
4.			
3.			
2.	ISSUED FOR PHASE 1 DRAFT PLAN APPROVAL	KRR	2026-02-20
1.	ISSUED FOR PHASE 1 DRAFT PLAN APPROVAL	KRR	2025-10-02

MTE
Engineers, Scientists, Surveyors
905-639-2552

NOT FOR CONSTRUCTION

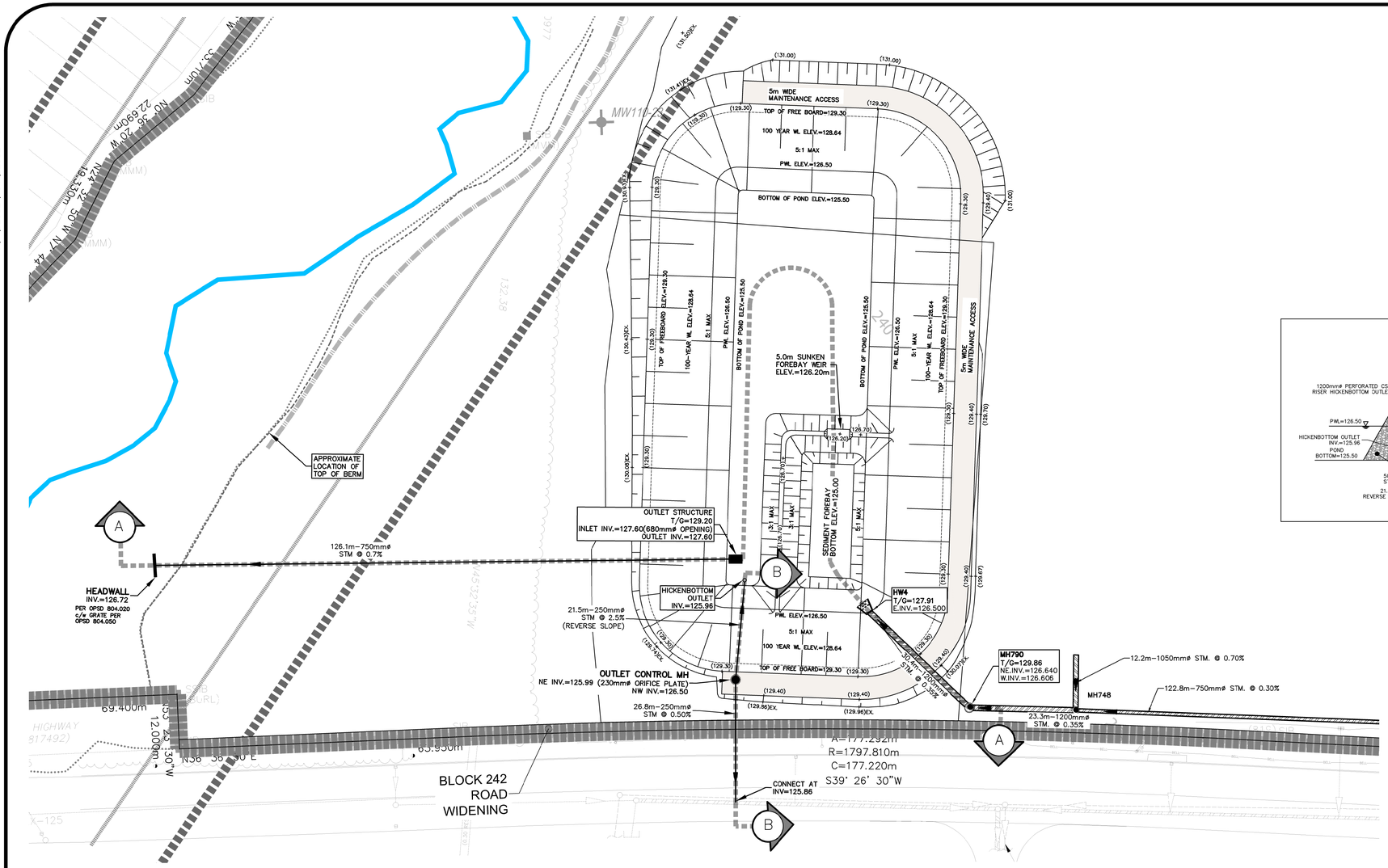
CLIENT
ALINEA LAND CORPORATION
4480 PALETTA COURT BURLINGTON, ON

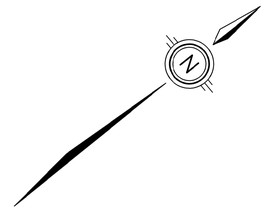
PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

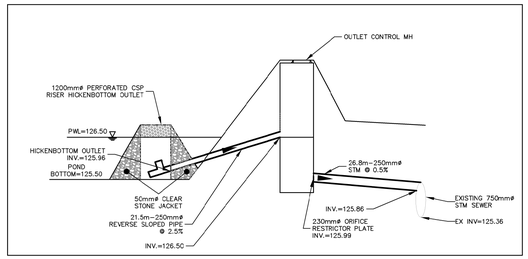
DRAWING
SWM FACILITY 1 DETAILS

Project Manager R.MELICK	Project No. 52982-104
Design By DXP	Checked By RSM
Drawn By CKM	Checked By RSM
Surveyed By OTHERS	Drawing No. SW1.2
Date May.29/24	
Scale AS SHOWN	Sheet 19 of 21

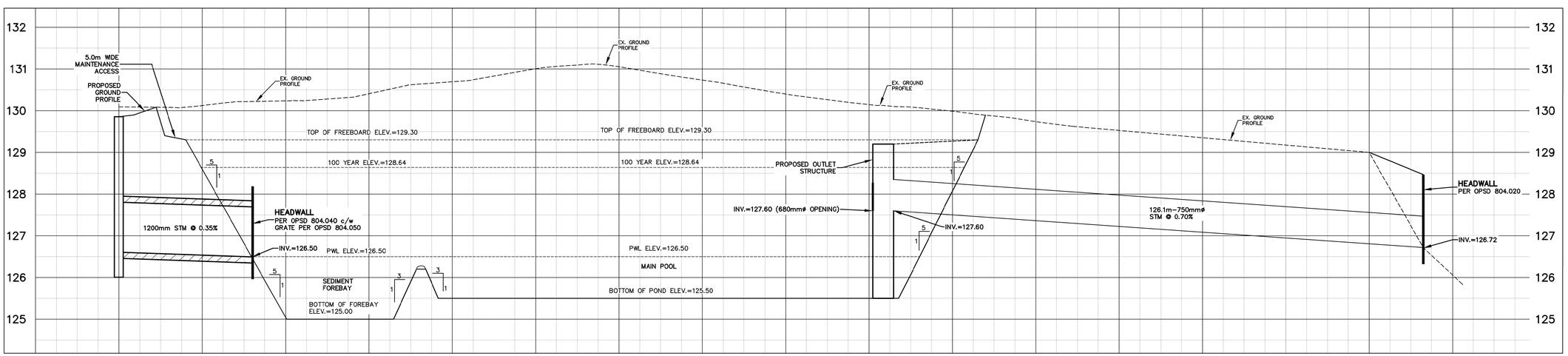
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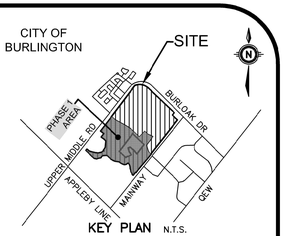


SECTION B–B
SCALE=N.T.S.



SECTION A–A
1:500H
1:50V

CITY OF BURLINGTON



KEY PLAN N.T.S.

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MTE
Engineers, Scientists, Surveyors
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NOT FOR CONSTRUCTION

CLIENT
ALINEA LAND CORPORATION
4480 PALETTA COURT BURLINGTON, ON

PROJECT
BRONTE CREEK MEADOWS PHASE 1
MAINWAY & BURLOAK DRIVE BURLINGTON, ON

DRAWING
SWM FACILITY POND 2 PLAN

Project Manager R.MELICK	Project No. 52982-104
Design By DXP	Checked By RSM
Drawn By CKM	Checked By RSM
Surveyed By OTHERS	Drawing No. SW1.3
Date May.29/24	
Scale 1:500	Sheet 20 of 21

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