

2 Metric units

```

**#*****
*# Project Name: [Waterdown Road] Project Number: [107016] *
*# Date : 09-14-2007 *
*# Modeller : [KB] *
*# Company : Philips Engineering Ltd *
*# License # : 3569108 *
**#*****

```

```

START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[1]
"BurSCS12.002"

```

```

READ STORM STORM_FILENAME=["STORM.001"]

```

```

*****PRE-DEVELOPMENT/EXISTING FLOWS

```

```

CALIB NASHYD ID=[1] NHYD=["6001"], DT=[5]min, AREA=[2.45](ha),
DWF=[0.0](cms), CN/C=[62.80], IA=[1.5](mm),
N=[3], TP=[0.092]hrs,
END=-1

```

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CALIB NASHYD ID=[2] NHYD=["6002"], DT=[5]min, AREA=[11.01](ha),
DWF=[0.0](cms), CN/C=[74.63], IA=[1.5](mm),
N=[3], TP=[0.149]hrs,
END=-1

```

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CALIB STANDHYD ID=[3] NHYD=["6004"], DT=[5](min), AREA=[1.46](ha),
XIMP=[0.01], TIMP=[0.813], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[82.38],
Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
LGP=[60](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[121](m), MNI=[0.013], SCI=[0](min),
END=-1

```

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ADD HYD IDsum=[4], NHYD=["6002.2"], IDs to add=[1+2+3]

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*Subcatchments associated with Tributary 1

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```

CALIB NASHYD ID=[1] NHYD=["1001"], DT=[5]min, AREA=[47.64](ha),
DWF=[0.0](cms), CN/C=[64.03], IA=[1.5](mm),
N=[3], TP=[0.375]hrs,
END=-1

```

```

ROUTE CHANNEL IDout=[2], NHYD=["1.002"], IDin=[1],
RDT=[2](min),
CHLGTH=[402](m), CHSLOPE=[2.24](%),
FPSLOPE=[2.24](%),
SECNUM=[1], NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 20, -0.05, 51, 0.08, 74] NSEG

```

times

```

( DISTANCE (m), ELEVATION (m))=[0, 135]
[20, 124]
[32, 123]
[51, 124]
[74, 134.5]

```

```

CALIB NASHYD ID=[1] NHYD=["1002"], DT=[5]min, AREA=[4.51](ha),
DWF=[0.0](cms), CN/C=[62.90], IA=[1.5](mm),
N=[3], TP=[0.171]hrs,
END=-1

```

```

ADD HYD IDsum=[3], NHYD=["1002.2"], IDs to add=[2+1]

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CALIB NASHYD ID=[1] NHYD=["1003"], DT=[5]min, AREA=[2.41](ha),

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                                EXR.dat
DWF=[0.0](cms), CN/C=[70.45], IA=[1.5](mm),
N=[3], TP=[0.143]hrs,
END=-1
*%-----|
CALIB STANDHYD ID=[5] NHYD=["1004"], DT=[5](min), AREA=[1.36](ha),
XIMP=[0.01], TIMP=[0.895], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[74.00],
Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
LGP=[60](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[121](m), MNI=[0.013], SCI=[0](min),
END=-1
*%-----|
ADD HYD IDsum=[2], NHYD=["1004.2"], IDs to add=[1+3+5]
*%-----|
ADD HYD IDsum=[1], NHYD=["1004.22"], IDs to add=[4+2]
*%-----|
CALIB NASHYD ID=[2] NHYD=["6003"], DT=[5]min, AREA=[5.59](ha),
DWF=[0.0](cms), CN/C=[79.03], IA=[1.5](mm)
N=[3], TP=[0.167]hrs,
END=-1
*%-----|
ADD HYD IDsum=[3], NHYD=["6003.2"], IDs to add=[1+2]
*%-----|
*****
*Subcatchments associated with Tributary 2
CALIB NASHYD ID=[1] NHYD=["2001"], DT=[5]min, AREA=[136.38](ha),
DWF=[0.0](cms), CN/C=[67.85], IA=[1.5](mm),
N=[3], TP=[0.519]hrs,
END=-1
*%-----|
ROUTE CHANNEL IDout=[2], NHYD=["2.002"], IDin=[1],
RDT=[2](min),
CHLGTH=[933](m), CHSLOPE=[1.5](%),
FPSLOPE=[1.5](%),
SECNUM=[2], NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 26, -0.05, 53, 0.08, 80] NSEG
times
( DISTANCE (m), ELEVATION (m))=[0, 139]
[26, 125]
[39, 124]
[53, 125]
[80, 138]
*%-----|
CALIB NASHYD ID=[1] NHYD=["2002"], DT=[5]min, AREA=[7.78](ha),
DWF=[0.0](cms), CN/C=[62.50], IA=[1.5](mm),
N=[3], TP=[0.510]hrs,
END=-1
*%-----|
ADD HYD IDsum=[4], NHYD=["2001.2"], IDs to add=[2+1]
*%-----|
CALIB STANDHYD ID=[1] NHYD=["2003"], DT=[5](min), AREA=[0.96](ha),
XIMP=[0.01], TIMP=[.859], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[74.00],
Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
LGP=[50](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[86](m), MNI=[0.013], SCI=[0](min),
END=-1
*%-----|
ADD HYD IDsum=[2], NHYD=["2002.2"], IDs to add=[1+4]
*%-----|
ADD HYD IDsum=[1], NHYD=["2002.22"], IDs to add=[2+3]

```

ExR.dat

```

*%-----|-----
CALIB NASHYD      ID=[2] NHYD=["7001"], DT=[5]min, AREA=[3.11](ha),
                  DWF=[0.0](cms), CN/C=[64.28], IA=[1.5](mm),
                  N=[3], TP=[0.099]hrs,
                  END=-1
*%-----|-----
ADD HYD          IDsum=[3], NHYD=["7001.2"], IDs to add=[1+2]
*%-----|-----
CALIB STANDHYD   ID=[1] NHYD=["2004"], DT=[5](min), AREA=[2.28](ha),
                  XIMP=[0.01], TIMP=[0.395], DWF=[0.0](cms), LOSS=[2],
                  SCS curve number CN=[68.00],
                  Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                      LGP=[48](m), MNP=[0.035], SCP=[0](min),
                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                      LGI=[195](m), MNI=[0.013], SCI=[0](min),
                  END=-1
*%-----|-----
ADD HYD          IDsum=[10], NHYD=["2004.2"], IDs to add=[1+3]
*%-----|-----
*****
*Subcatchments associated with Tributary 3
CALIB NASHYD     ID=[1] NHYD=["3001"], DT=[5]min, AREA=[78.24](ha),
                  DWF=[0.0](cms), CN/C=[61.86], IA=[1.5](mm),
                  N=[3], TP=[0.437]hrs,
                  END=-1
*%-----|-----
ROUTE CHANNEL    IDout=[3], NHYD=["3.002"], IDin=[1],
                  RDT=[2](min),
                  CHLGTH=[1097](m), CHSLOPE=[9.08](%),
                                      FPSLOPE=[9.08](%),
                  SECNUM=[3], NSEG=[3]
                  ( SEGROUGH, SEGDIST (m))=[0.08, 34, -0.05, 59, 0.08, 90] NSEG
times
                  ( DISTANCE (m), ELEVATION (m))=[0, 140]
                                                    [34, 123]
                                                    [48, 123]
                                                    [59, 125]
                                                    [90, 138]
*%-----|-----
CALIB NASHYD     ID=[1] NHYD=["3002"], DT=[5]min, AREA=[9.19](ha),
                  DWF=[0.0](cms), CN/C=[67.83], IA=[1.5](mm),
                  N=[3], TP=[0.530]hrs,
                  END=-1
*%-----|-----
ADD HYD          IDsum=[4], NHYD=["3002.2"], IDs to add=[1+3]
*%-----|-----
CALIB NASHYD     ID=[1] NHYD=["3010"], DT=[5]min, AREA=[4.15](ha),
                  DWF=[0.0](cms), CN/C=[62.50], IA=[1.5](mm),
                  N=[3], TP=[0.108]hrs,
                  END=-1
*%-----|-----
ADD HYD          IDsum=[9], NHYD=["3010.2"], IDs to add=[1+4]
*%-----|-----
CALIB STANDHYD   ID=[1] NHYD=["3003"], DT=[5](min), AREA=[1.99](ha),
                  XIMP=[0.482], TIMP=[0.482], DWF=[0.0](cms), LOSS=[2],
                  SCS curve number CN=[67.85],
                  Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                      LGP=[80.2](m), MNP=[0.035], SCP=[0](min),
                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                      LGI=[82.7](m), MNI=[0.013], SCI=[0](min),
                  END=-1
*%-----|-----
CALIB STANDHYD   ID=[4] NHYD=["3004"], DT=[5](min), AREA=[0.40](ha),

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                                EXR.dat
XIMP=[0.701], TIMP=[0.701], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[64.50],
Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                    LGP=[66.8](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                    LGI=[68.4](m), MNI=[0.013], SCI=[0](min),
END=-1
*%-----|-----|
ADD HYD      |IDsum=[8], NHYD=["3004.2"], IDs to add=[1+4]|
*%-----|-----|
CALIB STANDHYD |ID=[7] NHYD=["3005"], DT=[5](min), AREA=[2.80](ha),
XIMP=[0.01], TIMP=[.593], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[64.50],
Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                    LGP=[91](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                    LGI=[368](m), MNI=[0.013], SCI=[0](min),
END=-1
*%-----|-----|
*****|*****|
*Subcatchments associated with Tributary 4
CALIB NASHYD |ID=[1], NHYD=["4001"], DT=[5]min, AREA=[5.28](ha),
DWF=[0.0](cms), CN/C=[65.93], IA=[1.5](mm),
N=[3], TP=[0.190]hrs,
END=-1
*%-----|-----|
ROUTE CHANNEL |IDout=[2], NHYD=["4.003"], IDin=[1],
RDT=[2](min),
CHLGTH=[475](m), CHSLOPE=[1.26](%),
                    FPSLOPE=[1.26](%),
SECNUM=[4], NSEG=[3]
times        |( SEGROUGH, SEGDIST (m))=[0.08, 16.5, -0.05, 35, 0.08, 63] NSEG
                    ( DISTANCE (m), ELEVATION (m))=[0, 138.5]
                                                    [16.5, 131]
                                                    [27, 130.5]
                                                    [35, 131]
                                                    [63, 139]
*%-----|-----|
CALIB NASHYD |ID=[3], NHYD=["4003"], DT=[5]min, AREA=[3.13](ha),
DWF=[0.0](cms), CN/C=[62.60], IA=[1.5](mm),
N=[3], TP=[0.291]hrs,
END=-1
*%-----|-----|
CALIB NASHYD |ID=[4], NHYD=["4002"], DT=[5]min, AREA=[6.34](ha),
DWF=[0.0](cms), CN/C=[73.50], IA=[1.5](mm),
N=[3], TP=[0.231]hrs,
END=-1
*%-----|-----|
ADD HYD      |IDsum=[5], NHYD=["4003.2"], IDs to add=[2+3+4]|
*%-----|-----|
ROUTE CHANNEL |IDout=[1], NHYD=["4.006"], IDin=[5],
RDT=[2](min),
CHLGTH=[357](m), CHSLOPE=[5.04](%),
                    FPSLOPE=[5.04](%),
SECNUM=[4b], NSEG=[3]
times        |( SEGROUGH, SEGDIST (m))=[0.08, 18, -0.05, 37, 0.08, 45] NSEG
                    ( DISTANCE (m), ELEVATION (m))=[0, 121]
                                                    [18, 116]
                                                    [31, 116]
                                                    [37, 117]
                                                    [45, 120.5]

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ExR.dat

*%-----|-----
CALIB NASHYD ID=[3] NHYD=["4004A"], DT=[5]min, AREA=[0.64](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.056]hrs,
END=-1

*%-----|-----
CALIB NASHYD ID=[4] NHYD=["4004C"], DT=[5]min, AREA=[1.13](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.110]hrs,
END=-1

* Undeveloped Existing Fellowship Church Site - west Side
#####

*%-----|-----
CALIB NASHYD ID=[5] NHYD=["4010"], DT=[5]min, AREA=[0.85](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.066]hrs,
END=-1

*%-----|-----
ADD HYD IDsum=[6], NHYD=["4008.1"], IDs to add=[5+3+4+1]
*%-----|-----

CALIB NASHYD ID=[3] NHYD=["4004B"], DT=[5]min, AREA=[0.57](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.063]hrs,
END=-1

* Undeveloped Existing Fellowship Church Site - East Site
#####

CALIB NASHYD ID=[4] NHYD=["4011"], DT=[5]min, AREA=[0.09](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.033]hrs,
END=-1

*%-----|-----
ADD HYD IDsum=[5], NHYD=["4011"], IDs to add=[3+4]
*%-----|-----

* MINOR FLOW CAPACITY DETERMINED BY EXISTING 5 YEAR PEAK FLOW
#####

DIVERT HYD Idin=[5], NIDout=[2]max five,
outflow hydrographs (ID, NHYD)=[2,"Minor"/3,"Major"]
flow distribution table: (modify as necessary)
Note: all flows are in (cms)
QIDi + QIDii = QTOTAL
[0 + 0 = 0]
[0.067 + 0 = 0.067]
[0.067 + 2 = 2.067]
[0.067 + 10 = 10.067]
[0 + 0 = 0] end

*%-----|-----
ROUTE CHANNEL IDout=[1], NHYD=["4.007"], IDin=[3],
RDT=[2](min),
CHLGTH=[250](m), CHSLOPE=[2.40](%),
FPSLOPE=[2.40](%),
SECNUM=[5], NSEG=[3]
(SEGROUGH, SEGDIST (m))=[0.035, 2.4, -0.035, 4.0, 0.035, 6.4]

NSEG times
(DISTANCE (m), ELEVATION (m))=[0, 131.75]
[2.4, 131.50]
[3.7, 130.75]
[4.0, 130.75]
[6.4, 131.75]

*%-----|-----

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                                EXR.dat
ADD HYD                          IDsum=[3], NHYD=["4008.15"], IDs to add=[6+1]
*%-----|
CALIB NASHYD                      ID=[6], NHYD=["4006"], DT=[5]min, AREA=[3.37](ha),
                                  DWF=[0.0](cms), CN/C=[69.10], IA=[1.5](mm),
                                  N=[3], TP=[0.116]hrs,
                                  END=-1
*%-----|
CALIB STANDHYD                    ID=[4] NHYD=["4007"], DT=[5](min), AREA=[5.04](ha),
                                  XIMP=[0.315], TIMP=[0.315], DWF=[0.0](cms), LOSS=[2],
                                  SCS curve number CN=[72.75],
                                  Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                         LGP=[53](m), MNP=[0.035], SCP=[0](min),
                                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                         LGI=[168](m), MNI=[0.013], SCI=[0](min),
                                  END=-1
*%-----|
CALIB STANDHYD                    ID=[5] NHYD=["4008"], DT=[5](min), AREA=[2.42](ha),
                                  XIMP=[.218], TIMP=[.218], DWF=[0.0](cms), LOSS=[2],
                                  SCS curve number CN=[79.33],
                                  Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                         LGP=[56](m), MNP=[0.035], SCP=[0](min),
                                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                         LGI=[134](m), MNI=[0.013], SCI=[0](min),
                                  END=-1
*%-----|
ADD HYD                          IDsum=[1], NHYD=["4008.2"], IDs to add=[3+4+5+6]
*%-----|
CALIB STANDHYD                    ID=[3] NHYD=["4009"], DT=[5](min), AREA=[5.11](ha),
                                  XIMP=[0.01], TIMP=[.903], DWF=[0.0](cms), LOSS=[2],
                                  SCS curve number CN=[73.05],
                                  Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                         LGP=[180](m), MNP=[0.034], SCP=[0](min),
                                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                         LGI=[310](m), MNI=[0.013], SCI=[0](min),
                                  END=-1
*%-----|
ADD HYD                          IDsum=[5], NHYD=["4009.2"], IDs to add=[1+3]
*%-----|
*****
*Remaining Subcatchments associated with Tributary 3
ADD HYD                          IDsum=[4], NHYD=["3005.2"], IDs to add=[7+8+2]
*%-----|
* ROUTE RESERVOIR                 IDOUT=[5], NHYD=["SWM"], IDIN=[4],
*                                  RDT=[5](min),
*                                  TABLE OF (OUTFLOW-STORAGE) VALUES
*                                  (cms) - (ha-m)
*                                  [ 0.0   , 0.0   ]
*                                  [ 0.006 , 0.0500 ]
*                                  [ 0.48  , 0.0900 ]
*                                  [ 0.92  , 0.1250 ]
*                                  END=-1
*%-----|
ADD HYD                          IDsum=[1], NHYD=["3005.2"], IDs to add=[9+4]
*%-----|
CALIB STANDHYD                    ID=[3] NHYD=["3006"], DT=[5](min), AREA=[1.12](ha),
                                  XIMP=[0.01], TIMP=[.859], DWF=[0.0](cms), LOSS=[2],
                                  SCS curve number CN=[64.50],
                                  Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                         LGP=[53](m), MNP=[0.035], SCP=[0](min),
                                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                         LGI=[94](m), MNI=[0.013], SCI=[0](min),
                                  END=-1
*%-----|

```

EXR.dat

```

ADD HYD IDsum=[4], NHYD=["3005.2"], IDs to add=[1+3]
**%-----|
CALIB STANDHYD ID=[1] NHYD=["3009"], DT=[5](min), AREA=[1.93](ha),
XIMP=[0.01], TIMP=[.904], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[64.50],
Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
LGP=[58](m), MNP=[0.034], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[217](m), MNI=[0.013], SCI=[0](min),
END=-1
**%-----|
ADD HYD IDsum=[3], NHYD=["3009.2"], IDs to add=[1+4]
**%-----|
ADD HYD IDsum=[1], NHYD=["3009.22"], IDs to add=[10+3]
**%-----|
CALIB STANDHYD ID=[2] NHYD=["3007"], DT=[5](min), AREA=[2.08](ha),
XIMP=[0.01], TIMP=[.357], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[72.45],
Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
LGP=[47](m), MNP=[0.034], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[164](m), MNI=[0.013], SCI=[0](min),
END=-1
**%-----|
ADD HYD IDsum=[3], NHYD=["3007.2"], IDs to add=[1+2]
**%-----|
CALIB NASHYD ID=[1] NHYD=["2005"], DT=[5]min, AREA=[2.85](ha),
DWF=[0.0](cms), CN/C=[87.35], IA=[1.5](mm),
N=[3], TP=[0.052]hrs,
END=-1
**%-----|
ADD HYD IDsum=[2], NHYD=["2005.2"], IDs to add=[1+3]
**%-----|
CALIB STANDHYD ID=[1] NHYD=["3008"], DT=[5](min), AREA=[1.61](ha),
XIMP=[0.01], TIMP=[.395], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[74.25],
Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
LGP=[78](m), MNP=[0.034], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[164](m), MNI=[0.013], SCI=[0](min),
END=-1
**%-----|
ADD HYD IDsum=[3], NHYD=["3008.2"], IDs to add=[1+2]
**%-----|
*****
*Subcatchments associated with Tributary 5
CALIB NASHYD ID=[1], NHYD=["5001"], DT=[5]min, AREA=[62.5](ha),
DWF=[0.0](cms), CN/C=[30.12], IA=[1.5](mm),
N=[3], TP=[0.408]hrs,
END=-1
**%-----|
ROUTE CHANNEL IDout=[2], NHYD=["5.002"], IDin=[1],
RDT=[2](min),
CHLGTH=[912](m), CHSLOPE=[2.03](%),
FPSLOPE=[2.03](%),
SECNUM=[5], NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 30, -0.05, 55, 0.08, 80] NSEG
times
( DISTANCE (m), ELEVATION (m))=[0, 133]
[30, 122.5]
[41, 122.5]
[55, 123]
[80, 137]

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ExR.dat

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*%-----|-----
CALIB NASHYD ID=[3], NHYD=["5002"], DT=[5]min, AREA=[14.10](ha),
DWF=[0.0](cms), CN/C=[33.95], IA=[1.5](mm),
N=[3], TP=[0.255]hrs,
END=-1
*%-----|-----
CALIB NASHYD ID=[4], NHYD=["5004"], DT=[5]min, AREA=[3.48](ha),
DWF=[0.0](cms), CN/C=[78.00], IA=[1.5](mm),
N=[3], TP=[0.105]hrs,
END=-1
*%-----|-----
ADD HYD IDsum=[5], NHYD=["5002.2"], IDs to add=[2+3+4]
*%-----|-----
CALIB NASHYD ID=[1], NHYD=["5003"], DT=[5]min, AREA=[2.65](ha),
DWF=[0.0](cms), CN/C=[61.00], IA=[1.5](mm),
N=[3], TP=[0.143]hrs,
END=-1
*%-----|-----
ADD HYD IDsum=[2], NHYD=["5003.2"], IDs to add=[1+5]
*%-----|-----
* Maximum Drainage Area to Swale--Nevarc Drive
CALIB STANDHYD ID=[1] NHYD=["SWALE"], DT=[5](min), AREA=[0.50](ha),
XIMP=[0.95], TIMP=[.95], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[73.05],
Pervious surfaces: IAPER=[2.5](mm), SLPP=[1.0](%),
LGP=[12.9](m), MNP=[0.034], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[56.3](m), MNI=[0.013], SCI=[0](min),
END=-1
*%-----|-----
START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[2]
BurSCS12.005
START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[3]
BurSCS12.010
START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[4]
BurSCS12.025
START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[5]
BurSCS12.050
START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[6]
BurSCS12.100
START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[7]
CHI4HR5M.025
FINISH

```


2 Metric units

```

**#*****
*# Project Name: [Waterdown Road] Project Number: [107016] *
*# Date : 09-14-2007 *
*# Modeller : [KB] *
*# Company : Philips Engineering Ltd *
*# License # : 3569108 *
**#*****

```

```

START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[1]
      "BurSCS12.002"

```

```

READ STORM STORM_FILENAME=["STORM.001"]

```

```

*Subcatchments associated with Tributary 4
CALIB NASHYD

```

```

ID=[1], NHYD=["4001"], DT=[5]min, AREA=[5.28](ha),
DWF=[0.0](cms), CN/C=[65.93], IA=[1.5](mm),
N=[3], TP=[0.190]hrs,
END=-1

```

```

ROUTE CHANNEL

```

```

IDout=[2], NHYD=["4.003"], IDin=[1],
RDT=[2](min),
CHLGTH=[475](m), CHSLOPE=[1.26](%),
FPSLOPE=[1.26](%),
SECNUM=[4], NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 16.5, -0.05, 35, 0.08, 63] NSEG

```

times

```

( DISTANCE (m), ELEVATION (m))=[0, 138.5]
[16.5, 131]
[27, 130.5]
[35, 131]
[63, 139]

```

```

CALIB NASHYD

```

```

ID=[3], NHYD=["4003"], DT=[5]min, AREA=[3.13](ha),
DWF=[0.0](cms), CN/C=[62.60], IA=[1.5](mm),
N=[3], TP=[0.291]hrs,
END=-1

```

```

CALIB NASHYD

```

```

ID=[4], NHYD=["4002"], DT=[5]min, AREA=[6.34](ha),
DWF=[0.0](cms), CN/C=[73.50], IA=[1.5](mm),
N=[3], TP=[0.231]hrs,
END=-1

```

```

ADD HYD

```

```

IDsum=[5], NHYD=["4003.2"], IDs to add=[2+3+4]

```

```

ROUTE CHANNEL

```

```

IDout=[1], NHYD=["4.006"], IDin=[5],
RDT=[2](min),
CHLGTH=[357](m), CHSLOPE=[5.04](%),
FPSLOPE=[5.04](%),
SECNUM=[4b], NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 18, -0.05, 37, 0.08, 45] NSEG

```

times

```

( DISTANCE (m), ELEVATION (m))=[0, 121]
[18, 116]
[31, 116]
[37, 117]
[45, 120.5]

```

```

CALIB NASHYD

```

```

ID=[2] NHYD=["4004A"], DT=[5]min, AREA=[0.10](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.028]hrs,
END=-1

```

CALIB NASHYD ID=[3] NHYD=["4004B"], DT=[5]min, AREA=[0.36](ha), DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm), N=[3], TP=[0.046]hrs, END=-1

*%-----|-----|
CALIB NASHYD ID=[4] NHYD=["4004C"], DT=[5]min, AREA=[1.13](ha), DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm), N=[3], TP=[0.110]hrs, END=-1

*%-----|-----|

*#####
*# NEW FELLOWSHIP CHURCH - WEST DRAINAGE TO GRINDSTONE TRIB 4 #
*#####

CALIB STANDHYD ID=[5] NHYD=["4010A"], DT=[5](min), AREA=[0.35](ha), XIMP=[0.63], TIMP=[0.63], DWF=[0.0](cms), LOSS=[2], SCS curve number CN=[73.58], Pervious surfaces: IAper=[2.5](mm), SLPP=[1](%), LGP=[5](m), MNP=[0.035], SCP=[0](min), Impervious surfaces: IAimp=[0.5](mm), SLPI=[1](%), LGI=[30](m), MNI=[0.013], SCI=[0](min), END=-1

*%-----|-----|
CALIB NASHYD ID=[6] NHYD=["4010B"], DT=[5]min, AREA=[0.21](ha), DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm), N=[3], TP=[0.040]hrs, END=-1

*%-----|-----|

CALIB STANDHYD ID=[7] NHYD=["4010C"], DT=[5](min), AREA=[0.14](ha), XIMP=[0.36], TIMP=[0.36], DWF=[0.0](cms), LOSS=[2], SCS curve number CN=[73.58], Pervious surfaces: IAper=[2.5](mm), SLPP=[30](%), LGP=[5](m), MNP=[0.035], SCP=[0](min), Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%), LGI=[20](m), MNI=[0.013], SCI=[0](min), END=-1

*#####

***ADD HYD IDsum=[8], NHYD=["PND3IN"], IDs to add=[5+7]

***%-----|-----|

***ROUTE RESERVOIR IDout=[7], NHYD=["SWM-3"], IDin=[8],

*** RDT=[1](min),

*** TABLE of (OUTFLOW-STORAGE) values

*** (cms) - (ha-m)

*** [0.0 , 0.0]

*** [0.0001 , 0.0075]

*** [0.0120 , 0.0105]

*** [0.0203 , 0.0134]

*** [0.0261 , 0.0161]

*** [0.0441 , 0.0184]

*** [0.0579 , 0.0202]

*** [0.0682 , 0.0216]

*** [-1 , -1] (max twenty pts)

*** IDovf=[9], NHYDovf=["OVF"]

***%-----|-----|

***ADD HYD IDsum=[5], NHYD=["PND3OUT"], IDs to add=[7+9]

***%-----|-----|

ADD HYD IDsum=[8], NHYD=["WestSite"], IDs to add=[5+6+7]

*%-----|-----|

ADD HYD IDsum=[9], NHYD=["4008.1"], IDs to add=[1+2+3+4+8]

*%-----|-----|

*#####

*# NEW FELLOWSHIP CHURCH - EAST MAJOR DRAINAGE TO GRINDSTONE TRIB 4 #

*#####

CALIB STANDHYD ID=[1] NHYD=["4011A"], DT=[5](min), AREA=[0.12](ha),

```

FUT.dat
XIMP=[0.38], TIMP=[0.38], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[73.58],
Pervious surfaces: IAper=[2.5](mm), SLPP=[30](%),
LGP=[5](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[30](m), MNI=[0.013], SCI=[0](min),
END=-1
CALIB STANDHYD ID=[2] NHYD=["4011B"], DT=[5](min), AREA=[0.10](ha),
XIMP=[0.45], TIMP=[0.45], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[73.58],
Pervious surfaces: IAper=[2.5](mm), SLPP=[30](%),
LGP=[5](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[30](m), MNI=[0.013], SCI=[0](min),
END=-1
#####
CALIB NASHYD ID=[3] NHYD=["4004D"], DT=[5]min, AREA=[0.57](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.063]hrs,
END=-1
*%-----|-----
CALIB NASHYD ID=[4] NHYD=["4011ext"], DT=[5]min, AREA=[0.18](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.027]hrs,
END=-1
*%-----|-----
***ADD HYD IDsum=[5], NHYD=["PND1IN"], IDs to add=[1+4]
****%-----|-----
***ROUTE RESERVOIR IDout=[6], NHYD=["SWM-1"], IDin=[5],
RDT=[1](min),
TABLE of ( OUTFLOW-STORAGE ) values
(cms) - (ha-m)
[ 0.0 , 0.0 ]
[ 0.0026 , 0.0010]
[ 0.0044 , 0.0020]
[ 0.0057 , 0.0030]
[ 0.0068 , 0.0041]
[ 0.0102 , 0.0051]
[ 0.0129 , 0.0063]
[ 0.0149 , 0.0074]
[ 0.0167 , 0.0086]
[ -1 , -1 ] (max twenty pts)
IDovf=[7], NHYDovf=["OVF"]
****%-----|-----
***ADD HYD IDsum=[8], NHYD=["PND1OUT"], IDs to add=[6+7]
****%-----|-----
***ROUTE RESERVOIR IDout=[1], NHYD=["SWM-2"], IDin=[2],
RDT=[1](min),
TABLE of ( OUTFLOW-STORAGE ) values
(cms) - (ha-m)
[ 0.0 , 0.0 ]
[ 0.0017 , 0.0008]
[ 0.0030 , 0.0017]
[ 0.0038 , 0.0025]
[ 0.0045 , 0.0034]
[ 0.0051 , 0.0044]
[ 0.0057 , 0.0053]
[ -1 , -1 ] (max twenty pts)
IDovf=[4], NHYDovf=["OVF"]
****%-----|-----
***ADD HYD IDsum=[7], NHYD=["PND2OUT"], IDs to add=[1+4]
****%-----|-----
ADD HYD IDsum=[5], NHYD=["4011"], IDs to add=[1+2+3+4]

```

FUT.dat

 * MINOR FLOW CAPACITY DETERMINED BY EXISTING 5 YEAR PEAK FLOW
 #####

DIVERT HYD IDin=[5], NIDout=[2]max five,
 outflow hydrographs (ID, NHYD)=[2,"Minor"/3,"Major"]
 flow distribution table: (modify as necessary)
 Note: all flows are in (cms)

QIDi + QIDii = QTOTAL
 [0 + 0 = 0]
 [0.067 + 0 = 0.067]
 [0.067 + 2 = 2.067]
 [0.067 + 10 = 10.067]
 [0 + 0 = 0] end

 *%-----|-----|

ROUTE CHANNEL IDout=[1], NHYD=["4.007"], IDin=[3],
 RDT=[2](min),
 CHLGTH=[250](m), CHSLOPE=[2.40](%),
 FPSLOPE=[2.40](%),
 SECNUM=[5], NSEG=[3]
 (SEGROUGH, SEGDIST (m))=[0.035, 2.4, -0.035, 4.0, 0.035, 6.4]

NSEG times
 (DISTANCE (m), ELEVATION (m))=[0, 131.75]
 [2.4, 131.50]
 [3.7, 130.75]
 [4.0, 130.75]
 [6.4, 131.75]

*%-----|-----|

ADD HYD IDsum=[3], NHYD=["4008.15"], IDs to add=[9+1]

*%-----|-----|
 CALIB NASHYD ID=[6], NHYD=["4006"], DT=[5]min, AREA=[3.37](ha),
 DWF=[0.0](cms), CN/C=[69.10], IA=[1.5](mm),
 N=[3], TP=[0.116]hrs,
 END=-1

*%-----|-----|

CALIB STANDHYD ID=[4] NHYD=["4007"], DT=[5](min), AREA=[5.04](ha),
 XIMP=[0.315], TIMP=[0.315], DWF=[0.0](cms), LOSS=[2],
 SCS curve number CN=[72.75],
 Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
 LGP=[53](m), MNP=[0.035], SCP=[0](min),
 Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
 LGI=[168](m), MNI=[0.013], SCI=[0](min),
 END=-1

*%-----|-----|

CALIB STANDHYD ID=[5] NHYD=["4008"], DT=[5](min), AREA=[2.42](ha),
 XIMP=[.218], TIMP=[.218], DWF=[0.0](cms), LOSS=[2],
 SCS curve number CN=[79.33],
 Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
 LGP=[56](m), MNP=[0.035], SCP=[0](min),
 Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
 LGI=[134](m), MNI=[0.013], SCI=[0](min),
 END=-1

*%-----|-----|

ADD HYD IDsum=[1], NHYD=["4008.2"], IDs to add=[3+4+5+6]

*%-----|-----|

CALIB STANDHYD ID=[3] NHYD=["4009"], DT=[5](min), AREA=[5.11](ha),
 XIMP=[0.01], TIMP=[.903], DWF=[0.0](cms), LOSS=[2],
 SCS curve number CN=[73.05],
 Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
 LGP=[180](m), MNP=[0.034], SCP=[0](min),
 Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
 LGI=[310](m), MNI=[0.013], SCI=[0](min),
 END=-1

FUT.dat

```

*%-----|-----
ADD HYD      IDsum=[5], NHYD=["4009.2"], IDs to add=[1+3]
*%-----|-----
*****PRE-DEVELOPMENT/EXISTING FLOWS
CALIB NASHYD ID=[1] NHYD=["6001"], DT=[5]min, AREA=[2.45](ha),
              DWF=[0.0](cms), CN/C=[62.80], IA=[1.5](mm),
              N=[3], TP=[0.092]hrs,
              END=-1
*%-----|-----
CALIB NASHYD ID=[10] NHYD=["6002"], DT=[5]min, AREA=[11.01](ha),
              DWF=[0.0](cms), CN/C=[74.63], IA=[1.5](mm),
              N=[3], TP=[0.149]hrs,
              END=-1
*%-----|-----
CALIB STANDHYD ID=[3] NHYD=["6004"], DT=[5](min), AREA=[1.46](ha),
               XIMP=[0.01], TIMP=[0.813], DWF=[0.0](cms), LOSS=[2],
               SCS curve number CN=[82.38],
               Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                                   LGP=[60](m), MNP=[0.035], SCP=[0](min),
               Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                   LGI=[121](m), MNI=[0.013], SCI=[0](min),
               END=-1
*%-----|-----
ADD HYD      IDsum=[4], NHYD=["6002.2"], IDs to add=[1+10+3]
*%-----|-----
*****
*Subcatchments associated with Tributary 1
CALIB NASHYD ID=[1] NHYD=["1001"], DT=[5]min, AREA=[47.64](ha),
              DWF=[0.0](cms), CN/C=[64.03], IA=[1.5](mm),
              N=[3], TP=[0.375]hrs,
              END=-1
*%-----|-----
ROUTE CHANNEL IDout=[10], NHYD=["1.002"], IDin=[1],
              RDT=[2](min),
              CHLGTH=[402](m), CHSLOPE=[2.24](%),
                               FPSLOPE=[2.24](%),
              SECNUM=[1], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 20, -0.05, 51, 0.08, 74] NSEG
times
              ( DISTANCE (m), ELEVATION (m))=[0, 135]
                                                [20, 124]
                                                [32, 123]
                                                [51, 124]
                                                [74, 134.5]
*%-----|-----
CALIB NASHYD ID=[1] NHYD=["1002"], DT=[5]min, AREA=[4.51](ha),
              DWF=[0.0](cms), CN/C=[62.90], IA=[1.5](mm),
              N=[3], TP=[0.171]hrs,
              END=-1
*%-----|-----
ADD HYD      IDsum=[3], NHYD=["1002.2"], IDs to add=[10+1]
*%-----|-----
CALIB NASHYD ID=[1] NHYD=["1003"], DT=[5]min, AREA=[2.41](ha),
              DWF=[0.0](cms), CN/C=[70.45], IA=[1.5](mm),
              N=[3], TP=[0.143]hrs,
              END=-1
*%-----|-----
CALIB STANDHYD ID=[5] NHYD=["1004"], DT=[5](min), AREA=[1.36](ha),
               XIMP=[0.01], TIMP=[0.895], DWF=[0.0](cms), LOSS=[2],
               SCS curve number CN=[74.00],
               Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                                   LGP=[60](m), MNP=[0.035], SCP=[0](min),
               Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),

```

FUT.dat

LGI=[121](m), MNI=[0.013], SCI=[0](min),

END=-1

*%-----|-----|
ADD HYD IDsum=[10], NHYD=["1004.2"], IDs to add=[1+3+5]

*%-----|-----|
ADD HYD IDsum=[1], NHYD=["1004.22"], IDs to add=[4+10]

*%-----|-----|
CALIB NASHYD ID=[10] NHYD=["6003"], DT=[5]min, AREA=[5.59](ha),
DWF=[0.0](cms), CN/C=[79.03], IA=[1.5](mm)
N=[3], TP=[0.167]hrs,
END=-1

*%-----|-----|
ADD HYD IDsum=[3], NHYD=["6003.2"], IDs to add=[1+10]

*%-----|-----|

*Subcatchments associated with Tributary 2

CALIB NASHYD ID=[1] NHYD=["2001"], DT=[5]min, AREA=[136.38](ha),
DWF=[0.0](cms), CN/C=[67.85], IA=[1.5](mm),
N=[3], TP=[0.519]hrs,
END=-1

*%-----|-----|
ROUTE CHANNEL IDout=[10], NHYD=["2.002"], IDin=[1],
RDT=[2](min),
CHLGTH=[933](m), CHSLOPE=[1.5](%),
FPSLOPE=[1.5](%),
SECNUM=[2], NSEG=[3]
(SEGROUGH, SEGDIST (m))=[0.08, 26, -0.05, 53, 0.08, 80] NSEG

times

(DISTANCE (m), ELEVATION (m))=[0, 139]
[26, 125]
[39, 124]
[53, 125]
[80, 138]

*%-----|-----|
CALIB NASHYD ID=[1] NHYD=["2002"], DT=[5]min, AREA=[7.78](ha),
DWF=[0.0](cms), CN/C=[62.50], IA=[1.5](mm),
N=[3], TP=[0.510]hrs,
END=-1

*%-----|-----|
ADD HYD IDsum=[4], NHYD=["2001.2"], IDs to add=[10+1]

*%-----|-----|
CALIB STANDHYD ID=[1] NHYD=["2003"], DT=[5](min), AREA=[0.96](ha),
XIMP=[0.01], TIMP=[.859], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[74.00],
Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
LGP=[50](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[86](m), MNI=[0.013], SCI=[0](min),
END=-1

*%-----|-----|
ADD HYD IDsum=[10], NHYD=["2002.2"], IDs to add=[1+4]

*%-----|-----|
ADD HYD IDsum=[1], NHYD=["2002.22"], IDs to add=[10+3]

*%-----|-----|
CALIB NASHYD ID=[10] NHYD=["7001"], DT=[5]min, AREA=[3.11](ha),
DWF=[0.0](cms), CN/C=[64.28], IA=[1.5](mm),
N=[3], TP=[0.099]hrs,
END=-1

*%-----|-----|
ADD HYD IDsum=[3], NHYD=["7001.2"], IDs to add=[1+10]

*%-----|-----|
CALIB STANDHYD ID=[1] NHYD=["2004"], DT=[5](min), AREA=[2.28](ha),
XIMP=[0.01], TIMP=[0.395], DWF=[0.0](cms), LOSS=[2],

```

                                FUT.dat
SCS curve number CN=[68.00],
Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                    LGP=[48](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                    LGI=[195](m), MNI=[0.013], SCI=[0](min),
END=-1
*%-----|-----|
ADD HYD    IDsum=[10], NHYD=["2004.2"], IDs to add=[1+3]
*%-----|-----|
*****
*Subcatchments associated with Tributary 3
CALIB NASHYD ID=[1] NHYD=["3001"], DT=[5]min, AREA=[78.24](ha),
              DWF=[0.0](cms), CN/C=[61.86], IA=[1.5](mm),
              N=[3], TP=[0.437]hrs,
              END=-1
*%-----|-----|
ROUTE CHANNEL IDout=[3], NHYD=["3.002"], IDin=[1],
              RDT=[2](min),
              CHLGTH=[1097](m), CHSLOPE=[9.08](%),
              FPSLOPE=[9.08](%),
              SECNUM=[3], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 34, -0.05, 59, 0.08, 90] NSEG
times
              ( DISTANCE (m), ELEVATION (m))=[0, 140]
                                                [34, 123]
                                                [48, 123]
                                                [59, 125]
                                                [90, 138]
*%-----|-----|
CALIB NASHYD ID=[1] NHYD=["3002"], DT=[5]min, AREA=[9.19](ha),
              DWF=[0.0](cms), CN/C=[67.83], IA=[1.5](mm),
              N=[3], TP=[0.530]hrs,
              END=-1
*%-----|-----|
ADD HYD    IDsum=[4], NHYD=["3002.2"], IDs to add=[1+3]
*%-----|-----|
CALIB NASHYD ID=[1] NHYD=["3010"], DT=[5]min, AREA=[4.15](ha),
              DWF=[0.0](cms), CN/C=[62.50], IA=[1.5](mm),
              N=[3], TP=[0.108]hrs,
              END=-1
*%-----|-----|
ADD HYD    IDsum=[3], NHYD=["3010.2"], IDs to add=[1+4]
*%-----|-----|
CALIB STANDHYD ID=[1] NHYD=["3003"], DT=[5](min), AREA=[1.99](ha),
                XIMP=[0.482], TIMP=[0.482], DWF=[0.0](cms), LOSS=[2],
                SCS curve number CN=[67.85],
                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                LGP=[80.2](m), MNP=[0.035], SCP=[0](min),
                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                LGI=[82.7](m), MNI=[0.013], SCI=[0](min),
                END=-1
*%-----|-----|
CALIB STANDHYD ID=[4] NHYD=["3004"], DT=[5](min), AREA=[0.40](ha),
                XIMP=[0.701], TIMP=[0.701], DWF=[0.0](cms), LOSS=[2],
                SCS curve number CN=[64.50],
                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                LGP=[66.8](m), MNP=[0.035], SCP=[0](min),
                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                LGI=[68.4](m), MNI=[0.013], SCI=[0](min),
                END=-1
*%-----|-----|

```

```

                                FUT.dat
ADD HYD                        IDsum=[5], NHYD=["3004.2"], IDs to add=[1+4]
*%-----|-----|
CALIB STANDHYD                ID=[1] NHYD=["3005"], DT=[5](min), AREA=[2.80](ha),
                                XIMP=[0.01], TIMP=[.593], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[64.50],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[91](m), MNP=[0.035], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[368](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                        IDsum=[4], NHYD=["3005.2"], IDs to add=[1+2+5]
*%-----|-----|
* ROUTE RESERVOIR            IDOUT=[5], NHYD=["SWM"], IDIN=[4],
*                               RDT=[5](min),
*                               TABLE OF (OUTFLOW-STORAGE) VALUES
*                               (cms) - (ha-m)
*                               [ 0.0 , 0.0 ]
*                               [ 0.006 , 0.0500 ]
*                               [ 0.48 , 0.0900 ]
*                               [ 0.92 , 0.1250 ]
*                               END=-1

*%-----|-----|
ADD HYD                        IDsum=[1], NHYD=["3005.2"], IDs to add=[3+4]
*%-----|-----|
CALIB STANDHYD                ID=[3] NHYD=["3006"], DT=[5](min), AREA=[1.12](ha),
                                XIMP=[0.01], TIMP=[.859], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[64.50],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[53](m), MNP=[0.035], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[94](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                        IDsum=[4], NHYD=["3005.2"], IDs to add=[1+3]
*%-----|-----|
CALIB STANDHYD                ID=[1] NHYD=["3009"], DT=[5](min), AREA=[1.93](ha),
                                XIMP=[0.01], TIMP=[.904], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[64.50],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[58](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[217](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                        IDsum=[3], NHYD=["3009.2"], IDs to add=[1+4]
*%-----|-----|
ADD HYD                        IDsum=[1], NHYD=["3009.22"], IDs to add=[10+3]
*%-----|-----|
CALIB STANDHYD                ID=[2] NHYD=["3007"], DT=[5](min), AREA=[2.08](ha),
                                XIMP=[0.01], TIMP=[.357], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[72.45],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[47](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[164](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                        IDsum=[3], NHYD=["3007.2"], IDs to add=[1+2]
*%-----|-----|
CALIB NASHYD                  ID=[1] NHYD=["2005"], DT=[5]min, AREA=[2.85](ha),

```



```

                                FUT.dat
                                DWF=[0.0](cms), CN/C=[87.35], IA=[1.5](mm),
                                N=[3], TP=[0.052]hrs,
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[2], NHYD=["2005.2"], IDs to add=[1+3]
*%-----|-----|
CALIB STANDHYD                        ID=[1] NHYD=["3008"], DT=[5](min), AREA=[1.61](ha),
                                XIMP=[0.01], TIMP=[.395], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[74.25],
                                Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[78](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[164](m), MNI=[0.013], SCI=[0](min),
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[3], NHYD=["3008.2"], IDs to add=[1+2]
*%-----|-----|
*Subcatchments associated with Tributary 5
CALIB NASHYD                          ID=[1], NHYD=["5001"], DT=[5]min, AREA=[62.5](ha),
                                DWF=[0.0](cms), CN/C=[30.12], IA=[1.5](mm),
                                N=[3], TP=[0.408]hrs,
                                END=-1
*%-----|-----|
ROUTE CHANNEL                         IDout=[2], NHYD=["5.002"], IDin=[1],
                                RDT=[2](min),
                                CHLGTH=[912](m), CHSLOPE=[2.03](%),
                                                FPSLOPE=[2.03](%),
                                SECNUM=[5], NSEG=[3]
                                ( SEGROUGH, SEGDIST (m))=[0.08, 30, -0.05, 55, 0.08, 80] NSEG
times
                                ( DISTANCE (m), ELEVATION (m))=[0, 133]
                                                [30, 122.5]
                                                [41, 122.5]
                                                [55, 123]
                                                [80, 137]
*%-----|-----|
CALIB NASHYD                          ID=[3], NHYD=["5002"], DT=[5]min, AREA=[14.10](ha),
                                DWF=[0.0](cms), CN/C=[33.95], IA=[1.5](mm),
                                N=[3], TP=[0.255]hrs,
                                END=-1
*%-----|-----|
CALIB NASHYD                          ID=[4], NHYD=["5004"], DT=[5]min, AREA=[3.48](ha),
                                DWF=[0.0](cms), CN/C=[78.00], IA=[1.5](mm),
                                N=[3], TP=[0.105]hrs,
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[5], NHYD=["5002.2"], IDs to add=[2+3+4]
*%-----|-----|
CALIB NASHYD                          ID=[1], NHYD=["5003"], DT=[5]min, AREA=[2.65](ha),
                                DWF=[0.0](cms), CN/C=[61.00], IA=[1.5](mm),
                                N=[3], TP=[0.143]hrs,
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[2], NHYD=["5003.2"], IDs to add=[1+5]
*%-----|-----|
* Maximum Drainage Area to Swale--Nevarc Drive
CALIB STANDHYD                        ID=[1] NHYD=["SWALE"], DT=[5](min), AREA=[0.50](ha),
                                XIMP=[0.95], TIMP=[.95], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[73.05],
                                Pervious surfaces: IAPER=[2.5](mm), SLPP=[1.0](%),
                                                LGP=[12.9](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[56.3](m), MNI=[0.013], SCI=[0](min),

```

FUT.dat

```
END=-1
*%-----|-----|
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[2]
            BurSCS12.005
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[3]
            BurSCS12.010
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[4]
            BurSCS12.025
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[5]
            BurSCS12.050
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[6]
            BurSCS12.100
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[7]
            CHI4HR5M.025
FINISH
```

2 Metric units

```

**#*****
*# Project Name: [Waterdown Road] Project Number: [107016] *
*# Date : 09-14-2007 *
*# Modeller : [KB] *
*# Company : Philips Engineering Ltd *
*# License # : 3569108 *
**#*****

```

```

START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[1]
"BurSCS12.002"

```

```

READ STORM STORM_FILENAME=["STORM.001"]

```

```

*%-----|
*****

```

```

*Subcatchments associated with Tributary 4
CALIB NASHYD ID=[1], NHYD=["4001"], DT=[5]min, AREA=[5.28](ha),
DWF=[0.0](cms), CN/C=[65.93], IA=[1.5](mm),
N=[3], TP=[0.190]hrs,
END=-1

```

```

*%-----|

```

```

ROUTE CHANNEL IDout=[2], NHYD=["4.003"], IDin=[1],
RDT=[2](min),
CHLGTH=[475](m), CHSLOPE=[1.26](%),
FPSLOPE=[1.26](%),
SECNUM=[4], NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 16.5, -0.05, 35, 0.08, 63] NSEG

```

times

```

( DISTANCE (m), ELEVATION (m))=[0, 138.5]
[16.5, 131]
[27, 130.5]
[35, 131]
[63, 139]

```

```

*%-----|

```

```

CALIB NASHYD ID=[3], NHYD=["4003"], DT=[5]min, AREA=[3.13](ha),
DWF=[0.0](cms), CN/C=[62.60], IA=[1.5](mm),
N=[3], TP=[0.291]hrs,
END=-1

```

```

*%-----|

```

```

CALIB NASHYD ID=[4], NHYD=["4002"], DT=[5]min, AREA=[6.34](ha),
DWF=[0.0](cms), CN/C=[73.50], IA=[1.5](mm),
N=[3], TP=[0.231]hrs,
END=-1

```

```

*%-----|

```

```

ADD HYD IDsum=[5], NHYD=["4003.2"], IDs to add=[2+3+4]

```

```

*%-----|

```

```

ROUTE CHANNEL IDout=[1], NHYD=["4.006"], IDin=[5],
RDT=[2](min),
CHLGTH=[357](m), CHSLOPE=[5.04](%),
FPSLOPE=[5.04](%),
SECNUM=[4b], NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 18, -0.05, 37, 0.08, 45] NSEG

```

times

```

( DISTANCE (m), ELEVATION (m))=[0, 121]
[18, 116]
[31, 116]
[37, 117]
[45, 120.5]

```

```

*%-----|

```

```

CALIB NASHYD ID=[2] NHYD=["4004A"], DT=[5]min, AREA=[0.10](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.028]hrs,
END=-1

```

```

*%-----|

```

```

                                SWM.dat
CALIB NASHYD      ID=[3] NHYD=["4004B"], DT=[5]min, AREA=[0.36](ha),
                  DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
                  N=[3], TP=[0.046]hrs,
                  END=-1
*%-----|-----
CALIB NASHYD      ID=[4] NHYD=["4004C"], DT=[5]min, AREA=[1.13](ha),
                  DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
                  N=[3], TP=[0.110]hrs,
                  END=-1
*%-----|-----
*#####
*# NEW FELLOWSHIP CHURCH - WEST DRAINAGE TO GRINDSTONE TRIB 4 #
*#####
CALIB STANDHYD   ID=[5] NHYD=["4010A"], DT=[5](min), AREA=[0.35](ha),
                  XIMP=[0.63], TIMP=[0.63], DWF=[0.0](cms), LOSS=[2],
                  SCS curve number CN=[73.58],
                  Pervious surfaces: IAPER=[2.5](mm), SLPP=[1](%),
                                      LGP=[5](m), MNP=[0.035], SCP=[0](min),
                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1](%),
                                      LGI=[30](m), MNI=[0.013], SCI=[0](min),
                  END=-1
*%-----|-----
CALIB NASHYD      ID=[6] NHYD=["4010B"], DT=[5]min, AREA=[0.21](ha),
                  DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
                  N=[3], TP=[0.040]hrs,
                  END=-1
*%-----|-----
CALIB STANDHYD   ID=[7] NHYD=["4010C"], DT=[5](min), AREA=[0.14](ha),
                  XIMP=[0.36], TIMP=[0.36], DWF=[0.0](cms), LOSS=[2],
                  SCS curve number CN=[73.58],
                  Pervious surfaces: IAPER=[2.5](mm), SLPP=[30](%),
                                      LGP=[5](m), MNP=[0.035], SCP=[0](min),
                  Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                      LGI=[20](m), MNI=[0.013], SCI=[0](min),
                  END=-1
*#####
ADD HYD          IDsum=[8], NHYD=["PND3IN"], IDs to add=[5+7]
*%-----|-----
ROUTE RESERVOIR IDout=[7], NHYD=["SWM-3"], IDin=[8],
                  RDT=[1](min),
                  TABLE of ( OUTFLOW-STORAGE ) values
                                (cms) - (ha-m)
                                [ 0.0 , 0.0 ]
                                [ 0.0001 , 0.0075]
                                [ 0.0120 , 0.0105]
                                [ 0.0203 , 0.0134]
                                [ 0.0261 , 0.0161]
                                [ 0.0441 , 0.0184]
                                [ 0.0579 , 0.0202]
                                [ 0.0682 , 0.0216]
                                [ -1 , -1 ] (max twenty pts)
                  IDovf=[9], NHYDovf=["OVF"]
*%-----|-----
ADD HYD          IDsum=[5], NHYD=["PND3OUT"], IDs to add=[7+9]
*%-----|-----
ADD HYD          IDsum=[8], NHYD=["WestSite"], IDs to add=[5+6]
*%-----|-----
ADD HYD          IDsum=[9], NHYD=["4008.1"], IDs to add=[1+2+3+4+8]
*%-----|-----
*#####
*# NEW FELLOWSHIP CHURCH - EAST MAJOR DRAINAGE TO GRINDSTONE TRIB 4 #
*#####
CALIB STANDHYD   ID=[1] NHYD=["4011A"], DT=[5](min), AREA=[0.12](ha),

```

```

                                SWM.dat
XIMP=[0.38], TIMP=[0.38], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[73.58],
Pervious surfaces: IAper=[2.5](mm), SLPP=[30](%),
                    LGP=[5](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                    LGI=[30](m), MNI=[0.013], SCI=[0](min),
END=-1
CALIB STANDHYD ID=[2] NHYD=["4011B"], DT=[5](min), AREA=[0.10](ha),
XIMP=[0.45], TIMP=[0.45], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[73.58],
Pervious surfaces: IAper=[2.5](mm), SLPP=[30](%),
                    LGP=[5](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                    LGI=[30](m), MNI=[0.013], SCI=[0](min),
END=-1
*#####
CALIB NASHYD ID=[3] NHYD=["4004D"], DT=[5]min, AREA=[0.57](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.063]hrs,
END=-1
*%-----|-----
CALIB NASHYD ID=[4] NHYD=["4011ext"], DT=[5]min, AREA=[0.18](ha),
DWF=[0.0](cms), CN/C=[73.58], IA=[1.5](mm),
N=[3], TP=[0.027]hrs,
END=-1
*%-----|-----
ADD HYD IDsum=[5], NHYD=["PND1IN"], IDs to add=[1+4]
*%-----|-----
ROUTE RESERVOIR IDout=[6], NHYD=["SWM-1"], IDin=[5],
RDT=[1](min),
TABLE of ( OUTFLOW-STORAGE ) values
                (cms) - (ha-m)
                [ 0.0 , 0.0 ]
                [ 0.0026 , 0.0010 ]
                [ 0.0044 , 0.0020 ]
                [ 0.0057 , 0.0030 ]
                [ 0.0068 , 0.0041 ]
                [ 0.0102 , 0.0051 ]
                [ 0.0129 , 0.0063 ]
                [ 0.0149 , 0.0074 ]
                [ 0.0167 , 0.0086 ]
                [ -1 , -1 ] (max twenty pts)
                IDovf=[7], NHYDovf=["OVF"]
*%-----|-----
ADD HYD IDsum=[8], NHYD=["PND1OUT"], IDs to add=[6+7]
*%-----|-----
ROUTE RESERVOIR IDout=[1], NHYD=["SWM-2"], IDin=[2],
RDT=[1](min),
TABLE of ( OUTFLOW-STORAGE ) values
                (cms) - (ha-m)
                [ 0.0 , 0.0 ]
                [ 0.0017 , 0.0008 ]
                [ 0.0030 , 0.0017 ]
                [ 0.0038 , 0.0025 ]
                [ 0.0045 , 0.0034 ]
                [ 0.0051 , 0.0044 ]
                [ 0.0057 , 0.0053 ]
                [ -1 , -1 ] (max twenty pts)
                IDovf=[4], NHYDovf=["OVF"]
*%-----|-----
ADD HYD IDsum=[7], NHYD=["PND2OUT"], IDs to add=[1+4]
*%-----|-----
ADD HYD IDsum=[5], NHYD=["4011"], IDs to add=[3+7+8]

```

SWM.dat

 * MINOR FLOW CAPACITY DETERMINED BY EXISTING 5 YEAR PEAK FLOW
 #####

DIVERT HYD IDin=[5], NIDout=[2]max five,
 outflow hydrographs (ID, NHYD)=[2,"Minor"/3,"Major"]
 flow distribution table: (modify as necessary)

Note: all flows are in (cms)
 QIDi + QIDii = QTOTAL
 [0 + 0 = 0]
 [0.067 + 0 = 0.067]
 [0.067 + 2 = 2.067]
 [0.067 + 10 = 10.067]
 [0 + 0 = 0] end

#####

*%-----|-----|
 ROUTE CHANNEL IDout=[1], NHYD=["4.007"], IDin=[3],
 RDT=[2](min),
 CHLGTH=[250](m), CHSLOPE=[2.40](%),
 FPSLOPE=[2.40](%),
 SECNUM=[5], NSEG=[3]
 (SEGROUGH, SEGDIST (m))=[0.035, 2.4, -0.035, 4.0, 0.035, 6.4]
 NSEG times
 (DISTANCE (m), ELEVATION (m))=[0, 131.75]
 [2.4, 131.50]
 [3.7, 130.75]
 [4.0, 130.75]
 [6.4, 131.75]

*%-----|-----|
 ADD HYD IDsum=[3], NHYD=["4008.15"], IDs to add=[9+1]
 *%-----|-----|

CALIB NASHYD ID=[6], NHYD=["4006"], DT=[5]min, AREA=[3.37](ha),
 DWF=[0.0](cms), CN/C=[69.10], IA=[1.5](mm),
 N=[3], TP=[0.116]hrs,
 END=-1

*%-----|-----|
 CALIB STANDHYD ID=[4] NHYD=["4007"], DT=[5](min), AREA=[5.04](ha),
 XIMP=[0.315], TIMP=[0.315], DWF=[0.0](cms), LOSS=[2],
 SCS curve number CN=[72.75],
 Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
 LGP=[53](m), MNP=[0.035], SCP=[0](min),
 Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
 LGI=[168](m), MNI=[0.013], SCI=[0](min),
 END=-1

*%-----|-----|
 CALIB STANDHYD ID=[5] NHYD=["4008"], DT=[5](min), AREA=[2.42](ha),
 XIMP=[.218], TIMP=[.218], DWF=[0.0](cms), LOSS=[2],
 SCS curve number CN=[79.33],
 Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
 LGP=[56](m), MNP=[0.035], SCP=[0](min),
 Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
 LGI=[134](m), MNI=[0.013], SCI=[0](min),
 END=-1

*%-----|-----|
 ADD HYD IDsum=[1], NHYD=["4008.2"], IDs to add=[3+4+5+6]
 *%-----|-----|

CALIB STANDHYD ID=[3] NHYD=["4009"], DT=[5](min), AREA=[5.11](ha),
 XIMP=[0.01], TIMP=[.903], DWF=[0.0](cms), LOSS=[2],
 SCS curve number CN=[73.05],
 Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
 LGP=[180](m), MNP=[0.034], SCP=[0](min),
 Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
 LGI=[310](m), MNI=[0.013], SCI=[0](min),
 END=-1

SWM.dat

```

*%-----|-----
ADD HYD      IDsum=[5], NHYD=["4009.2"], IDs to add=[1+3]
*%-----|-----
*****PRE-DEVELOPMENT/EXISTING FLOWS
CALIB NASHYD ID=[1] NHYD=["6001"], DT=[5]min, AREA=[2.45](ha),
              DWF=[0.0](cms), CN/C=[62.80], IA=[1.5](mm),
              N=[3], TP=[0.092]hrs,
              END=-1
*%-----|-----
CALIB NASHYD ID=[10] NHYD=["6002"], DT=[5]min, AREA=[11.01](ha),
              DWF=[0.0](cms), CN/C=[74.63], IA=[1.5](mm),
              N=[3], TP=[0.149]hrs,
              END=-1
*%-----|-----
CALIB STANDHYD ID=[3] NHYD=["6004"], DT=[5](min), AREA=[1.46](ha),
               XIMP=[0.01], TIMP=[0.813], DWF=[0.0](cms), LOSS=[2],
               SCS curve number CN=[82.38],
               Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                                   LGP=[60](m), MNP=[0.035], SCP=[0](min),
               Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                   LGI=[121](m), MNI=[0.013], SCI=[0](min),
               END=-1
*%-----|-----
ADD HYD      IDsum=[4], NHYD=["6002.2"], IDs to add=[1+10+3]
*%-----|-----
*****
*Subcatchments associated with Tributary 1
CALIB NASHYD ID=[1] NHYD=["1001"], DT=[5]min, AREA=[47.64](ha),
              DWF=[0.0](cms), CN/C=[64.03], IA=[1.5](mm),
              N=[3], TP=[0.375]hrs,
              END=-1
*%-----|-----
ROUTE CHANNEL IDout=[10], NHYD=["1.002"], IDin=[1],
              RDT=[2](min),
              CHLGTH=[402](m), CHSLOPE=[2.24](%),
                               FPSLOPE=[2.24](%),
              SECNUM=[1], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 20, -0.05, 51, 0.08, 74] NSEG
times
              ( DISTANCE (m), ELEVATION (m))=[0, 135]
                                                [20, 124]
                                                [32, 123]
                                                [51, 124]
                                                [74, 134.5]
*%-----|-----
CALIB NASHYD ID=[1] NHYD=["1002"], DT=[5]min, AREA=[4.51](ha),
              DWF=[0.0](cms), CN/C=[62.90], IA=[1.5](mm),
              N=[3], TP=[0.171]hrs,
              END=-1
*%-----|-----
ADD HYD      IDsum=[3], NHYD=["1002.2"], IDs to add=[10+1]
*%-----|-----
CALIB NASHYD ID=[1] NHYD=["1003"], DT=[5]min, AREA=[2.41](ha),
              DWF=[0.0](cms), CN/C=[70.45], IA=[1.5](mm),
              N=[3], TP=[0.143]hrs,
              END=-1
*%-----|-----
CALIB STANDHYD ID=[5] NHYD=["1004"], DT=[5](min), AREA=[1.36](ha),
               XIMP=[0.01], TIMP=[0.895], DWF=[0.0](cms), LOSS=[2],
               SCS curve number CN=[74.00],
               Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                                   LGP=[60](m), MNP=[0.035], SCP=[0](min),
               Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),

```

SWM.dat

LGI=[121](m), MNI=[0.013], SCI=[0](min),

END=-1

*%-----|-----|
ADD HYD IDsum=[10], NHYD=["1004.2"], IDs to add=[1+3+5]

*%-----|-----|
ADD HYD IDsum=[1], NHYD=["1004.22"], IDs to add=[4+10]

*%-----|-----|
CALIB NASHYD ID=[10] NHYD=["6003"], DT=[5]min, AREA=[5.59](ha),
DWF=[0.0](cms), CN/C=[79.03], IA=[1.5](mm)
N=[3], TP=[0.167]hrs,
END=-1

*%-----|-----|
ADD HYD IDsum=[3], NHYD=["6003.2"], IDs to add=[1+10]

*%-----|-----|

*Subcatchments associated with Tributary 2

CALIB NASHYD ID=[1] NHYD=["2001"], DT=[5]min, AREA=[136.38](ha),
DWF=[0.0](cms), CN/C=[67.85], IA=[1.5](mm),
N=[3], TP=[0.519]hrs,
END=-1

*%-----|-----|
ROUTE CHANNEL IDout=[10], NHYD=["2.002"], IDin=[1],
RDT=[2](min),
CHLGTH=[933](m), CHSLOPE=[1.5](%),
FPSLOPE=[1.5](%),
SECNUM=[2], NSEG=[3]
(SEGRROUGH, SEGDIST (m))=[0.08, 26, -0.05, 53, 0.08, 80] NSEG

times

(DISTANCE (m), ELEVATION (m))=[0, 139]
[26, 125]
[39, 124]
[53, 125]
[80, 138]

*%-----|-----|
CALIB NASHYD ID=[1] NHYD=["2002"], DT=[5]min, AREA=[7.78](ha),
DWF=[0.0](cms), CN/C=[62.50], IA=[1.5](mm),
N=[3], TP=[0.510]hrs,
END=-1

*%-----|-----|
ADD HYD IDsum=[4], NHYD=["2001.2"], IDs to add=[10+1]

*%-----|-----|
CALIB STANDHYD ID=[1] NHYD=["2003"], DT=[5](min), AREA=[0.96](ha),
XIMP=[0.01], TIMP=[.859], DWF=[0.0](cms), LOSS=[2],
SCS curve number CN=[74.00],
Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
LGP=[50](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
LGI=[86](m), MNI=[0.013], SCI=[0](min),
END=-1

*%-----|-----|
ADD HYD IDsum=[10], NHYD=["2002.2"], IDs to add=[1+4]

*%-----|-----|
ADD HYD IDsum=[1], NHYD=["2002.22"], IDs to add=[10+3]

*%-----|-----|
CALIB NASHYD ID=[10] NHYD=["7001"], DT=[5]min, AREA=[3.11](ha),
DWF=[0.0](cms), CN/C=[64.28], IA=[1.5](mm),
N=[3], TP=[0.099]hrs,
END=-1

*%-----|-----|
ADD HYD IDsum=[3], NHYD=["7001.2"], IDs to add=[1+10]

*%-----|-----|
CALIB STANDHYD ID=[1] NHYD=["2004"], DT=[5](min), AREA=[2.28](ha),
XIMP=[0.01], TIMP=[0.395], DWF=[0.0](cms), LOSS=[2],


```

                                SWM.dat
SCS curve number CN=[68.00],
Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                    LGP=[48](m), MNP=[0.035], SCP=[0](min),
Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                    LGI=[195](m), MNI=[0.013], SCI=[0](min),
END=-1
*%-----|-----|
ADD HYD    IDsum=[10], NHYD=["2004.2"], IDs to add=[1+3]
*%-----|-----|
*****
*Subcatchments associated with Tributary 3
CALIB NASHYD ID=[1] NHYD=["3001"], DT=[5]min, AREA=[78.24](ha),
              DWF=[0.0](cms), CN/C=[61.86], IA=[1.5](mm),
              N=[3], TP=[0.437]hrs,
              END=-1
*%-----|-----|
ROUTE CHANNEL IDout=[3], NHYD=["3.002"], IDin=[1],
              RDT=[2](min),
              CHLGTH=[1097](m), CHSLOPE=[9.08](%),
              FPSLOPE=[9.08](%),
              SECNUM=[3], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 34, -0.05, 59, 0.08, 90] NSEG
times
              ( DISTANCE (m), ELEVATION (m))=[0, 140]
                                                [34, 123]
                                                [48, 123]
                                                [59, 125]
                                                [90, 138]
*%-----|-----|
CALIB NASHYD ID=[1] NHYD=["3002"], DT=[5]min, AREA=[9.19](ha),
              DWF=[0.0](cms), CN/C=[67.83], IA=[1.5](mm),
              N=[3], TP=[0.530]hrs,
              END=-1
*%-----|-----|
ADD HYD    IDsum=[4], NHYD=["3002.2"], IDs to add=[1+3]
*%-----|-----|
CALIB NASHYD ID=[1] NHYD=["3010"], DT=[5]min, AREA=[4.15](ha),
              DWF=[0.0](cms), CN/C=[62.50], IA=[1.5](mm),
              N=[3], TP=[0.108]hrs,
              END=-1
*%-----|-----|
ADD HYD    IDsum=[3], NHYD=["3010.2"], IDs to add=[1+4]
*%-----|-----|
CALIB STANDHYD ID=[1] NHYD=["3003"], DT=[5](min), AREA=[1.99](ha),
                XIMP=[0.482], TIMP=[0.482], DWF=[0.0](cms), LOSS=[2],
                SCS curve number CN=[67.85],
                Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                LGP=[80.2](m), MNP=[0.035], SCP=[0](min),
                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                LGI=[82.7](m), MNI=[0.013], SCI=[0](min),
                END=-1
*%-----|-----|
CALIB STANDHYD ID=[4] NHYD=["3004"], DT=[5](min), AREA=[0.40](ha),
                XIMP=[0.701], TIMP=[0.701], DWF=[0.0](cms), LOSS=[2],
                SCS curve number CN=[64.50],
                Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                LGP=[66.8](m), MNP=[0.035], SCP=[0](min),
                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                LGI=[68.4](m), MNI=[0.013], SCI=[0](min),
                END=-1
*%-----|-----|

```

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                                SWM.dat
ADD HYD                          IDsum=[5], NHYD=["3004.2"], IDs to add=[1+4]
*%-----|-----|
CALIB STANDHYD                   ID=[1] NHYD=["3005"], DT=[5](min), AREA=[2.80](ha),
                                XIMP=[0.01], TIMP=[.593], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[64.50],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[91](m), MNP=[0.035], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[368](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                          IDsum=[4], NHYD=["3005.2"], IDs to add=[1+2+5]
*%-----|-----|
* ROUTE RESERVOIR                IDOUT=[5], NHYD=["SWM"], IDIN=[4],
*                                RDT=[5](min),
*                                TABLE OF (OUTFLOW-STORAGE) VALUES
*                                (cms) - (ha-m)
*                                [ 0.0 , 0.0 ]
*                                [ 0.006 , 0.0500 ]
*                                [ 0.48 , 0.0900 ]
*                                [ 0.92 , 0.1250 ]
*                                END=-1

*%-----|-----|
ADD HYD                          IDsum=[1], NHYD=["3005.2"], IDs to add=[3+4]
*%-----|-----|
CALIB STANDHYD                   ID=[3] NHYD=["3006"], DT=[5](min), AREA=[1.12](ha),
                                XIMP=[0.01], TIMP=[.859], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[64.50],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[53](m), MNP=[0.035], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[94](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                          IDsum=[4], NHYD=["3005.2"], IDs to add=[1+3]
*%-----|-----|
CALIB STANDHYD                   ID=[1] NHYD=["3009"], DT=[5](min), AREA=[1.93](ha),
                                XIMP=[0.01], TIMP=[.904], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[64.50],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[58](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[217](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                          IDsum=[3], NHYD=["3009.2"], IDs to add=[1+4]
*%-----|-----|
ADD HYD                          IDsum=[1], NHYD=["3009.22"], IDs to add=[10+3]
*%-----|-----|
CALIB STANDHYD                   ID=[2] NHYD=["3007"], DT=[5](min), AREA=[2.08](ha),
                                XIMP=[0.01], TIMP=[.357], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[72.45],
                                Pervious surfaces: IAper=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[47](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[164](m), MNI=[0.013], SCI=[0](min),
                                END=-1

*%-----|-----|
ADD HYD                          IDsum=[3], NHYD=["3007.2"], IDs to add=[1+2]
*%-----|-----|
CALIB NASHYD                     ID=[1] NHYD=["2005"], DT=[5]min, AREA=[2.85](ha),

```

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                                SWM.dat
                                DWF=[0.0](cms), CN/C=[87.35], IA=[1.5](mm),
                                N=[3], TP=[0.052]hrs,
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[2], NHYD=["2005.2"], IDs to add=[1+3]
*%-----|-----|
CALIB STANDHYD                        ID=[1] NHYD=["3008"], DT=[5](min), AREA=[1.61](ha),
                                XIMP=[0.01], TIMP=[.395], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[74.25],
                                Pervious surfaces: IAPER=[2.5](mm), SLPP=[3.4](%),
                                                LGP=[78](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[164](m), MNI=[0.013], SCI=[0](min),
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[3], NHYD=["3008.2"], IDs to add=[1+2]
*%-----|-----|
*Subcatchments associated with Tributary 5
CALIB NASHYD                          ID=[1], NHYD=["5001"], DT=[5]min, AREA=[62.5](ha),
                                DWF=[0.0](cms), CN/C=[30.12], IA=[1.5](mm),
                                N=[3], TP=[0.408]hrs,
                                END=-1
*%-----|-----|
ROUTE CHANNEL                         IDout=[2], NHYD=["5.002"], IDin=[1],
                                RDT=[2](min),
                                CHLGTH=[912](m), CHSLOPE=[2.03](%),
                                                FPSLOPE=[2.03](%),
                                SECNUM=[5], NSEG=[3]
                                ( SEGROUGH, SEGDIST (m))=[0.08, 30, -0.05, 55, 0.08, 80] NSEG
times
                                ( DISTANCE (m), ELEVATION (m))=[0, 133]
                                                [30, 122.5]
                                                [41, 122.5]
                                                [55, 123]
                                                [80, 137]
*%-----|-----|
CALIB NASHYD                          ID=[3], NHYD=["5002"], DT=[5]min, AREA=[14.10](ha),
                                DWF=[0.0](cms), CN/C=[33.95], IA=[1.5](mm),
                                N=[3], TP=[0.255]hrs,
                                END=-1
*%-----|-----|
CALIB NASHYD                          ID=[4], NHYD=["5004"], DT=[5]min, AREA=[3.48](ha),
                                DWF=[0.0](cms), CN/C=[78.00], IA=[1.5](mm),
                                N=[3], TP=[0.105]hrs,
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[5], NHYD=["5002.2"], IDs to add=[2+3+4]
*%-----|-----|
CALIB NASHYD                          ID=[1], NHYD=["5003"], DT=[5]min, AREA=[2.65](ha),
                                DWF=[0.0](cms), CN/C=[61.00], IA=[1.5](mm),
                                N=[3], TP=[0.143]hrs,
                                END=-1
*%-----|-----|
ADD HYD                                IDsum=[2], NHYD=["5003.2"], IDs to add=[1+5]
*%-----|-----|
* Maximum Drainage Area to Swale--Nevarc Drive
CALIB STANDHYD                        ID=[1] NHYD=["SWALE"], DT=[5](min), AREA=[0.50](ha),
                                XIMP=[0.95], TIMP=[.95], DWF=[0.0](cms), LOSS=[2],
                                SCS curve number CN=[73.05],
                                Pervious surfaces: IAPER=[2.5](mm), SLPP=[1.0](%),
                                                LGP=[12.9](m), MNP=[0.034], SCP=[0](min),
                                Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.5](%),
                                                LGI=[56.3](m), MNI=[0.013], SCI=[0](min),

```

SWM.dat

```
END=-1
*%-----|-----|
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[2]
            BurSCS12.005
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[3]
            BurSCS12.010
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[4]
            BurSCS12.025
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[5]
            BurSCS12.050
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[6]
            BurSCS12.100
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[7]
            CHI4HR5M.025
FINISH
```