

General Sanitary Design Flow per Halton Region Design Manual

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PROPOSED DEVELOPMENT - Fellowship Church - 1350 Waterdown Road, Burlington, On

Site Area = 1.50 ha

Type of Development = Community Service

Number of Units = 1

Sewage Discharge

Population = 60.00 people

Equivalent Population Density = 40.00 persons per hectare (per Halton Design Manual)

Unit Sewage Flow = 0.275 m³/cap.day

Average Dry Weather Flow = Population x Unit Sewage Flow
= 60 x 0.275 = 16.5 m³/day
= 0.191 Litres / sec

Peak Wastewater Flow Factor = $M = 1 + 14/4 + P^{0.5}$, where P is in Thousands, M = 2 min

$M = 1 + 14/4 + (0.06)^{0.5} = 4.30$

Infiltration Allowance = $0.286 \times 10^{-3} \text{ m}^3 / \text{sec} / \text{ha} = 0.286 \times 10^{-3} \times 1.5 \text{ ha} = 0.0004 \text{ m}^3 / \text{sec}$

Therefore, 0.429 L/sec

Design Flow = Average Flow x Peak Factor + Infiltration

= 1.25 Litres / sec

Water Usage

Based on water for sewage discharge

Residential: Average = 16.50 m³ / day
Peak = 107.98 m³ / day