

APPENDIX D

Domestic Sanitary Flows Calculations

DRAFT

Existing Domestic Sanitary Flow

Site Area: 14.5
 Approx. Area Lost to Public Open Space: 2.6
 Remaining Area: 11.9 ha
 Population Density: 2.91 persons/unit
 Number of units: 150
 Population: 437

Notes & References

Region of Niagara Development Charge Background Study Appendix A

Design Parameters

Average Flow (L/capita/d)
275

Niagara Region Water & Wastewater Master Servicing Plan (2016) Volume 4

Sanitary Design Flow:

Average Daily Flow =	275.0	L/capita/d	Average Daily Flow = Average Daily Flow (L/cap./day) * population / 86400
Average Daily Flow =	1.39	L/s	
Harmon Peak Factor: M =	4.00		$M = 1 + 14 / (4 + (p/1000)^{.5})$
Peak Flow =	5.56	L/s	Peak Flow = Average Daily Flow * M
Infiltration Flow: Infiltration =	0.29	L/s/ha	Niagara Region Water & Wastewater Master Servicing Plan (2016) Volume 4
Total Infiltration =	3.45	L/s	
Total Peak Flow =	9.01	L/s	Total Peak Flow = Peak Flow + Total Infiltration

Summary Table

Average Daily Flow (L/s)	Peaking Factor	Peak Flow (L/s)	Infiltration Flow (L/s)	Total Peak Flow (L/s)
1.39	4.00	5.56	3.45	9.01