

Water and Wastewater Modelling Demand Table

Site Plan Applications

Version	Date	Description of Revision
1.0	January 10 2023	Posted to Peel Website
2.0	August 30 2024	Reflects 2023 Linear Wastewater Standards and ICI population estimates as per Peel 2020 DC background study

Introduction

Water and wastewater modelling may be required as a condition of the development approval process or prior to regional site servicing connection approval where intensification is proposed, where a possible increase in water demand or wastewater discharge is identified or where deemed necessary by Regional staff.

A completed table includes the Professional Engineer’s signature and stamp as well as a site servicing concept. The table will be deemed complete once all the information below is submitted and/or included. Modelling will commence once the information is deemed complete. All required calculations must be submitted with the completed demand table. The calculations shall be based on the specific development proposal.

Application Information

Application Number:	
Address:	
Consulting Engineer:	
Date Prepared:	

Population

Existing

		Units	Persons
1	Residential ³⁾		
2	Institutional/Employment ³⁾		
3	Total		

Proposed

			Units	Persons
4	Residential ¹⁾	singles/semis (4.2 ppu)		
5		Townhomes (3.4 ppu)		
6		Large apartments (>1 bedroom – 3.1 ppu)		
7		Small apartments (<=1 bedroom – 1.7 ppu)		
8		Total proposed residential		
9	Proposed Institutional ²⁾			
10	Proposed employment ³⁾			
11	Total Proposed			

Other

12	Existing gross floor area for commercial and/or retail (sqm)	
13	Proposed gross floor area for commercial and/or retail (sqm)	
14	Land area (ha)	

Water Connection

Hydrant flow test ⁴⁾

15	Location 1	
16	Location 2	

WATER AND WASTEWATER MODELLING DEMAND TABLE

		Pressure (kPa)	Flow (L/s)	Time
17	Minimum water pressure			
18	Maximum water pressure			

Water Demands (L/s)

		Use 1 ⁶⁾	Use 2 ⁶⁾	Use 3 ⁶⁾	Total
19	Existing fire flow ^{5) 8)}				
20	Proposed average day flow				
21	Proposed maximum day flow				
22	Proposed peak hour flow				
23	Proposed fire flow ⁵⁾				

Water calculations

Please use the following updated typical water demand criteria as per Peel's 2020 Development Charges background study.

Population Type	Unit	Average Consumption Rate	Max Day Factor	Peak Hour Factor
Residential	L/cap/d	270	1.8	3.0
Institutional/Commercial/Industrial	L/emp/d	250	1.4	3.0

Wastewater Connection

Wastewater Effluent (L/s)

		Discharge location ⁷⁾	Flow
24	Existing effluent ⁸⁾		
25	Proposed effluent		
26	Proposed effluent		
27	Proposed effluent		
28	Proposed additional effluent ⁸⁾		
29	Other proposed effluent*		
30	Total proposed effluent		

*Please specify other proposed effluent (ex. occasional tank purges, off peak discharge, pool drainage)

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Wastewater calculations

Please use the following updated daily per capita as per 2023 Peel Linear Wastewater Standards

Population Type	Unit	Average Day Demand	Min Peaking Factor	Max Peaking Factor	Inflow and Infiltration**
Residential	L/cap/d	290	2	4	0.26L/s/Ha
Non-residential	L/emp/d	270	2	4	0.26L/s/Ha

**For maintenance holes that are flood prone or located in low lying areas, an extra 0.28 L/s per maintenance hole may be added to the I&I calculation.

Notes

- 1) In accordance with Peel Linear Wastewater Standards and Region of Peel 2020 DC background Study
- 2) refer to Peel Linear Wastewater Standards
- 3) For the commercial and industrial design flow calculations, please refer to Schedule 8b on page A-9 of the Region of Peel 2020 DC background Study to determine population.
- 4) Please include the graphs associated with the hydrant flow test data. Hydrant flow tests should be performed within 2 years of submission to the Region. The Region will not permit hydrant flow tests during the winter, please contact Region Water Operations for scheduling. The Region reserves the right to request an updated hydrant flow test as required at any time.
- 5) Please reference the Fire Underwriters Survey Document
- 6) Please identify the flows for each use type, **if applicable**
- 7) Please include drainage plan for multiple discharge locations
- 8) For Intensification, sites with additions to buildings or additional buildings please provide existing flow for existing buildings and the added flows for the new proposal, **if applicable**