

Appendix 4: WWTP Reserve Capacity for 2020

Wastewater Treatment Plant	MOE Plant Rated Capacity	90 % of Plant Capacity ⁽¹⁾	5-Year Average Daily Flow	Total Capacity Used	Reserve Treatment Capacity (90% base) (m³/d)	Design Flow Rate ⁽²⁾ (365 Lcd)	Reserve Serviceable Population Equivalents	10-Year Forecast For Population (Res & Emp)	Surplus Population 10-Year Projection
	(m³/d)								
Anger Avenue (Fort Erie) WWTP	24,500	22,050	14,202	58%	7,848	365	21,500	4,277	17,223
Baker Road (Grimsby) WWTP	31,280	28,152	19,347	62%	8,805	365	24,125	16,791	7,334
Crystal Beach (Fort Erie) WWTP	9,100	8,190	5,686	62%	2,504	365	6,861	1,443	5,418
Niagara Falls WWTP ⁽³⁾	68,300	61,470	39,731	58%	21,739	365	59,559	19,980	39,579
NOTL WWTP ⁽⁴⁾	8,000	7,200	4,730	59%	2,470	365	6,767	2,644	4,123
Port Dalhousie (St. Catharines) WWTP	61,350	55,215	34,065	56%	21,150	365	57,944	15,005	42,939
Port Weller (St. Catharines) WWTP	56,180	50,562	34,317	61%	16,245	365	44,508	10,052	34,456
Queenston (NOTL) WWTP ⁽⁵⁾	500	450	212	42%	238	365	653	99	554
Seaway (Port Colborne) WWTP	19,600	17,640	11,707	60%	5,933	365	16,254	1,622	14,632
Stevensville/Douglastown Lagoon	2,289	2,060	1,588	69%	472	365	1,293	795	498
Welland WWTP	54,550	49,095	34,107	63%	14,988	365	41,064	12,912	28,152

Note 1: Region's W&WW MSP (GM BluePlan, 2017) requires planning process for expansion when plant capacity exceeds 80%, and expansion should be completed when capacity exceeds 90%.

Note 2: Design Flow Rate incorporated 90 L/c/d of extraneous flow allowance

Note 3: The Niagara Falls WWTP assessment includes the sewage flows from the St. David's area of Niagara-on-the-Lake.

Note 4: Effluent discharge from NOTL WWTP started directly in January 2020 with previously used lagoon, decommissioned.

Note 5: The Queenston WWTP in Niagara-on-the-Lake has a unique capacity commitment of 226 m³/d for the following properties: Niagara Parks Commission (75 m³/d), Niagara Falls Bridge Commission (63 m³/d), Shalamar Campground (38 m³/d) and Ontario Power Generation (50 m³/d). Due to these commitments and limited UAB, limited residential growth is expected within the next 10 year period within the tributary area.