

APPENDIX 3

Regional Water Treatment Facilities Reserve Capacity Calculation for 2019

Treatment Facility	Permit To Take Water (1) (ML/D)	Rated Treatment Capacity (ML/D)	Peaking Factor (2)	Theoretical Average Day Capacity (ML/D)	90% of Average Day Capacity (3) (ML/D)	5-Year Average Day Flow (ML/D)	% of Total Capacity Used	Reserve Treatment Capacity (Based on 90%) (ML/D)	Design Flow Rate (275 l/c/d)	Reserve Serviceable Population (Equivalents)	10-Year Forecast For Population (Residential & Employment)	Surplus Population Over 10-Year Projection
DeCew Falls WTP	227.0	227.3	1.496	151.9	136.7	54.5	36%	82.2	275	298,909	30,398	268,511
Grimsby WTP	44.0	44.0	1.587	27.7	24.9	15.1	54%	9.9	275	36,000	14,771	21,229
Niagara Falls WTP	145.5	145.5	1.577	92.3	83.1	45.2	49%	37.9	275	137,818	23,782	114,036
Port Colborne WTP	45.5	36.0	1.640	22.0	19.8	8.3	38%	11.5	275	41,818	1,552	40,266
Rosehill WTP	78.0	50.0	1.482	33.7	30.3	12.6	37%	17.8	275	64,727	6,375	58,352
Welland WTP	110.0	65.0	1.486	43.7	39.3	21.7	50%	17.6	275	64,000	12,292	51,708

(1) Original MOE approved quantity of raw water permitted (Permit To Take Water).

(2) The peaking factors used are based on an average of actual flow rates of maximum day versus average day flows over the past three years at each facility.

(3) 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%.