

APPENDIX 3

Regional Water Treatment Facilities Reserve Capacity Calculation for 2018

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	1.561	145.6	131.0	54.3	37%	76.8	275	279,273	30,398	248,875
Grimsby WTP	44.0	44.0	1.676	26.3	23.7	15.3	58%	8.4	275	30,545	14,771	15,774
Niagara Falls WTP	145.5	145.5	1.569	92.7	83.4	45.2	49%	38.2	275	138,909	23,782	115,127
Port Colborne WTP	45.5	36.0	1.564	23.0	20.7	8.6	37%	12.1	275	44,000	1,552	42,448
Rosehill WTP	78.0	50.0	1.526	32.8	29.5	12.9	39%	16.6	275	60,364	6,375	53,989
Welland WTP	110.0	102.3	1.517	67.4	60.7	21.4	32%	39.3	275	142,909	12,292	130,617

(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%.