



REGIONAL MUNICIPALITY OF NIAGARA
Public Works Department
Water & Wastewater Services Division

WELLAND WATER TREATMENT PLANT

ANNUAL SUMMARY REPORT

(Prepared under Ontario Regulation 170/03)

January 1 to December 31, 2019

Ministry of the Environment, Conservation and Parks

Drinking Water Works Permit # 007-204
Municipal Drinking Water License # 007-104

1. Failure to meet with the requirements of the Act, the regulation, the system's approval:

The Welland Water Treatment Plant was found to be in non-compliance with regulations and/or system Licence, as follows:

Inspection Rating	95.88%
Non-Compliance	Niagara Region was found to be in non-compliance with section 16-6 of schedule 16 of O. Reg. 170/03 which requires immediate notification of adverse water quality incidents to the Medical Officer of Health and the Spills Action Centre.
Event Details	<p>On August 3, 2018, following non-invasive maintenance work within the Bemis Elevated Tank, a two-phase tank disinfection process was initiated in accordance with the Drinking Water Works Permit. Upon completion of the first phase of disinfection, the tank was filled with treated water in order to meet water retention requirements for phase two. During the second phase, a watermain break caused a decrease in system pressure resulting in a release of approximately 0.193 ML of improperly disinfected water to the distribution system.</p> <p>Following the release, sampling results from Niagara Region and the City of Welland were negative for bacteriological parameters, meeting provincial requirements. The event was not reported to the Medical Officer of Health or the Spills Action Centre.</p> <p>Upon internal review, incident details were provided to Public Health and the Ministry of Environment, Conservation and Parks for review. Public Health was satisfied that the drinking water remained safe during and after the incident.</p> <p>On November 29, 2018, Niagara Region reported to the Spills Action Centre that, on August 3, 2018, a release of approximately 0.193 ML of improperly disinfected water occurred at the Bemis Elevated Tank while the Region was performing the disinfection of the tank.</p>
Corrective Actions	Details of the incident, internal procedures, the disinfection requirements of the Drinking Water Works Permit, and reporting requirements from Section 16-4 were reviewed with pertinent staff. In addition, affected staff are required to complete manager quality and compliance training within six months of arrival and once every three years thereafter.

2. A summary of flows for the reporting period January 1, 2019 – December 31, 2019:

2019	TOTAL FLOW Raw (ML)	TOTAL FLOW Treated (ML)	AVERAGE DAY Raw (ML)	AVERAGE DAY Treated (ML)	MAX. DAY Treated (ML)	MIN. DAY Treated (ML)	MAX. FLOW RATE Treated (ML/d)	MIN. FLOW RATE Treated (ML/d)	WASTE SLUDGE (ML)
Jan	663.870	650.530	21.415	21.016	23.954	18.654	41.500	25.644	22.975
Feb	614.750	597.235	21.955	21.363	25.025	18.460	42.794	19.525	27.640
Mar	679.410	667.126	21.916	21.551	25.162	19.000	42.431	20.109	22.781
Apr	640.200	627.266	21.340	20.941	23.448	19.444	42.562	20.062	23.395
May	694.010	669.421	22.387	21.634	24.422	17.556	47.666	23.688	34.338
Jun	713.800	691.059	23.793	23.076	26.331	19.380	43.312	22.341	39.256
Jul	858.750	835.247	27.702	26.987	31.300	22.168	43.744	14.969	40.244
Aug	796.380	787.374	25.690	25.441	28.782	21.886	46.612	14.413	26.939
Sep	703.560	690.526	23.452	23.053	28.480	18.718	46.594	6.095	29.116
Oct	707.110	677.685	22.810	21.888	32.400	12.760	42.031	24.731	18.706
Nov	727.160	649.755	24.239	21.681	24.680	19.806	42.725	6.456	18.796
Dec	713.820	691.082	23.026	22.317	25.614	19.888	42.956	18.276	33.557
TOTAL	8512.820	8234.307							304.186
MIN						12.760		6.095	18.706
MAX					32.400		47.666		304.186
AVG			23.311	22.579					25.349

*The flow rates are moments in time, and can be affected by various circumstances, such as pump changes or valve position and therefore not unusual to have higher or lower than normal flow.

3. A comparison of actual flows to that of the flow rates set out in the system's approval:

Flow rates as set in:

- Drinking Water Works Permit # 007-204
- Municipal Drinking Water License # 007-104

Maximum daily flow 65.000 ML
Maximum flow rate 65.000 ML/day

2019	AVERAGE DAY Treated (ML)	% OF RATED CAPACITY	MAX. DAY Treated (ML)	% OF RATED CAPACITY	MAX. FLOW RATE Treated (ML/d)	% OF RATED CAPACITY
Jan	21.016	32.3%	23.954	36.9%	41.5	63.8%
Feb	21.363	32.9%	25.025	38.5%	42.794	65.8%
Mar	21.551	33.2%	25.162	38.7%	42.431	65.3%
Apr	20.941	32.2%	23.448	36.1%	42.562	65.5%
May	21.634	33.3%	24.422	37.6%	47.666	73.3%
Jun	23.076	35.5%	26.331	40.5%	43.312	66.6%
Jul	26.987	41.5%	31.3	48.2%	43.744	67.3%
Aug	25.441	39.1%	28.782	44.3%	46.612	71.7%
Sep	23.053	35.5%	28.48	43.8%	46.594	71.7%
Oct	21.888	33.7%	32.4	49.8%	42.031	64.7%
Nov	21.681	33.4%	24.68	38.0%	42.725	65.7%
Dec	22.317	34.3%	25.614	39.4%	42.956	66.1%