



THE CORPORATION OF THE  
*Township Of Pelee*

Established 1868

1045 West Shore Road, Pelee Island, Ontario, Canada N0R 1M0  
Telephone: 519-724-2931 \ Toll Free: 1-866-889-5203 \ Fax: 519-724-2470  
Email: [info@pelee.ca](mailto:info@pelee.ca) \ Website: [www.pelee.org](http://www.pelee.org)

July 26, 2018

The Corporation of the Township of Pelee is required to provide an *Annual Report* for its Ministry of the Environment regulated drinking water system (DWS) under Drinking Water Systems Regulation O. Reg. 170/03 in accordance with the *Safe Drinking Water Act* (as amended). The purpose of this letter and its attachments is to satisfy this requirement and report the dates from January 1, 2017 until December 31, 2017

The Township of Pelee owns and operates the *Pelee West Shore Water System* is a Non - Class *Water Treatment and Distribution System* serving a *Designated Facility* having a DWS registration number of 220008177. The *Pelee West Shore Water System* operates under Ontario Regulation 170/03. The *Pelee West Shore Water System* supplies one additional drinking water system within the Township; *Pelee East Shore Distribution* receives its water via tanker truck from the *Pelee West Shore Water System*. There were no "Boil Water Advisory's" issued by the Windsor Essex County Health Unit in 2017. This report outlines the sampling and direct connections to the *Pelee West Shore Water System*.

The *Pelee West Shore Water System* is designated as a *Small-Municipal, Non-Residential* DWS and serves a population of 7, having 4 residential connections and 1 designated facility. There are 18 total service connections. The *Pelee West Shore Well Supply* system utilizes ultra-membrane filtration, Ultraviolet Light and Sodium Hypochlorite (12% solution) injection as its methods of treatment. The treatment system utilizes continuous monitors for turbidity, chlorine, temperature, pH and Ultraviolet dose to monitor the water entering, being treated and sent to the distribution systems. The *Pelee West Shore Water System* does not include fluoridation in its process. Since upgraded in 2015 the system utilizes a winter and summer mode of operations. Summer operations included the utilization of the 140m<sup>3</sup> standpipe storage tank. While winter operation utilizing in plant storage only.

Under *Schedule 12* of O. Reg. 170/03 the Township is required to complete microbiological testing of its raw intake, treatment and distribution systems. Table 1 outlines these analytical results

**Table 1**  
**Schedule 12 Sampling Completed**  
**January 1, 2017 – December 31, 2017**

<b>Sample Type</b>	<b># of Samples</b>	<b>Range of E. Coli Results min # – max #</b>	<b>Range of Total Coliform Results min # – max #</b>
Raw	12	0 – 164	0 – 22
Treated	12	0 – 0	0 – 0
Distribution	12	0 – 0	0 – 0

Note – All analysis results in CFU's (Colony Forming Units)

The Township is also required to take treatment and distribution samples for various inorganic parameters under *O. Reg. 170/03, Schedule 6-1.1 (4), Schedule 23 and Schedule 24*. The inorganic parameter for Nitrate and Nitrite samples are required to be taken quarterly or not longer than 120 days between sampling. A total of four (4) Nitrate and Nitrite were taken for the purpose of this report complying with the sampling program. Table 2 outlines these analytical results.

**Table 2**  
**Inorganic Sampling Completed**  
**January 1, 2017 – December 31, 2017**

<b>Parameter</b>	<b>Sample Date</b>	<b>Result</b>	<b>Unit of Measure</b>	<b>Exceedance</b>
Nitrate	January 17	0.6	Mg/L	No
	April 17	0.9	Mg/L	No
	June 20	0.8	Mg/L	No
	September 19	0.7	Mg/L	No
	December 18	0.4	Mg/L	No
Nitrite	January 17	<0.1	Mg/L	No
	April 17	<0.1	Mg/L	No
	June 20	<0.1	Mg/L	No
	September 19	<0.1	Mg/L	No
	December 18	<0.1	Mg/L	No
Nitrate + Nitrite	January 17	0.6	Mg/L	No
	April 17	0.9	Mg/L	No
	June 20	0.8	Mg/L	No
	September 19	0.7	Mg/L	No
	December 18	0.4	Mg/L	No

Mg/L – milligrams per litre

Under *Schedule 9 of O. Reg. 170/03* the Township is required to report the distribution grab samples and treatment operation continuous samples in this Annual Report. Elevated finished water turbidity from continuous monitoring was recorded during maintenance and flushing activities within the plant. These results are listed below in Table 3.

**Table 3**  
**Schedule 9 Sampling Results**  
**January 1, 2017 – December 31, 2017**

Analysis	Distribution (grab sample)		Treated (Continuous Sample)	
	# taken	Min – Max	# taken	Min – Max
Free Chlorine (mg/L )	102	0.34 – 1.86	Every 2 min	0.0 – 5.01
Turbidity (NTU)	NP	NP	Every 2 min	0.0 – 1.99

Mg/L – milligrams per litre

NTU – Nephelometric Turbidity Units

NP – Not Performed

Note – Continuous Samples taken from SCADA monitoring data, min. due to cleaning, max. due to calibrations and cleaning

The SCADA system began monitoring and recording filter turbidity effluent that could be interpreted in June 2016. Under the *Procedures for Disinfection of Drinking Water in Ontario* document the Ultra-membrane filters utilized at the WTP must operate within specified turbidity effluent criteria to be considered for disinfection. The filters must produce water with a turbidity not exceeding 0.10 at least 90% of their run time. The annual average of the filtered turbidity recorded was 0.036629 NTU. The average run time percent of 98.32 was achieved for being recorded below 0.1 NTU.

The Corporation of the Township of Pelee  
 Environmental Services Department

