

2017 Schedule 22 Annual Summary Report

Longlac Drinking-Water System

March 2018

Prepared by the



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

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Section 1: Introduction

This report is a summary of water quality information for the Longlac Drinking-Water System, published in accordance with Schedule 22 of Ontario's Drinking-Water Systems Regulation for the reporting period of January 1st to December 31st 2017. The Longlac Drinking-Water System is categorized as a Large Municipal Residential Drinking Water System.

This report is prepared by The Ontario Clean Water Agency on behalf of the Corporation of the Municipality of Greenstone – Longlac Ward. A copy of the Summary Report is to be provided to the members of the municipal council by March 31st 2018.

Section 2: What Does This Report Contain?

"The report must,

- (a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and,
- (b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure."

- O. Reg. 170/03 s. 22 (2)

"The report must also include the following information for the purpose of enabling the owner of the system to assess the rated capability of their system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement."

-O. Reg. 170/03 s. 22 (3)

Section 3: Daily Flow Rates

In accordance with the ***Municipal Drinking Water Licence 225-105 Schedule C: System – Specific Conditions 1.0 Performance Limits***, the Longlac drinking water system shall not be operated to exceed the rated capacity for maximum flow rate from the treatment subsystem to the distribution system of 4540 m³ / day.

The drinking water system may be operated temporarily at a rate above the rated capacity where necessary for:

- (i) the purposes of fighting a large fire or,
- (ii) the maintenance of the drinking-water system

In 2017, the average monthly raw flow rate was 30233.08 m³; the average raw daily flow rate was 993.48 m³, with a maximum raw daily flow rate of 1684.00 m³.

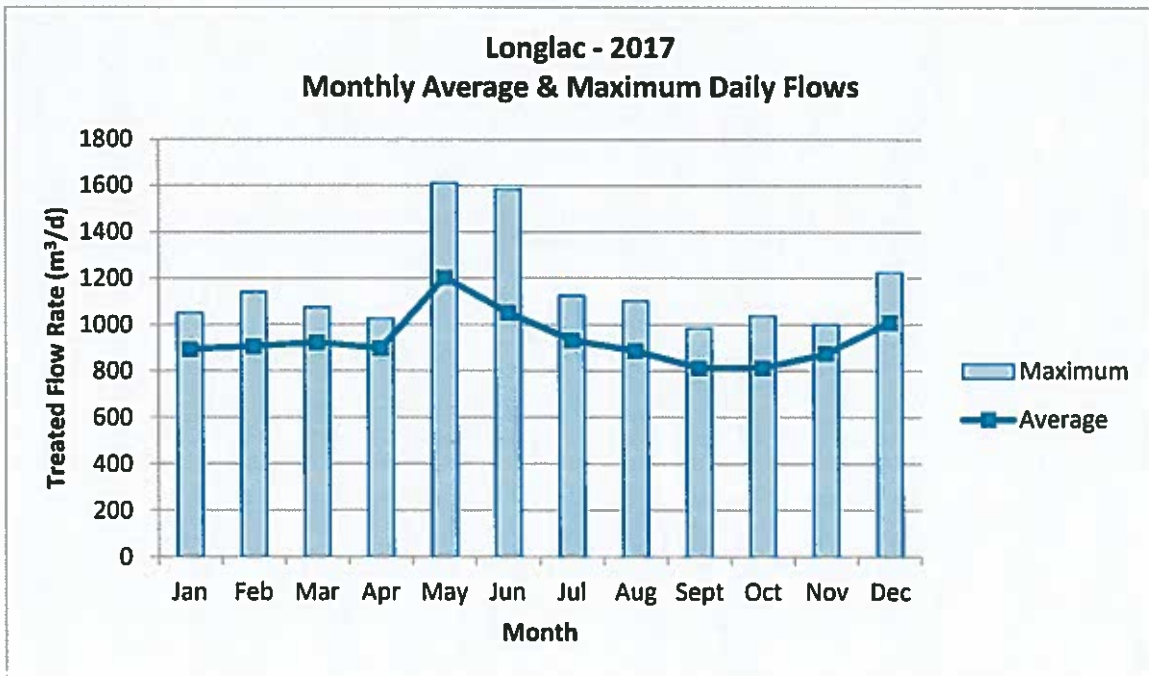
In 2017, the average monthly treated flow rate was 28460.42 m³; the average daily treated flow was 935.19 m³ and the maximum daily treated flow for the year was 1615.00 m³; this represents 35.57% of the allowable daily volume.

A summary of raw and treated flows, including maximum raw flow into the treatment system as well as treated average, maximum and total flow rates are included in the tables below.

The quantity of raw water supplied during the reporting period did not exceed the terms and conditions of the *Permit to Take Water* nor did the treated flows directed to the distribution system exceed the rated capacity for this system.

Monthly Raw & Treated Flow Rates for 2017

Month	Average Daily Raw Flow Rate (m ³ /d)	Maximum Daily Raw Flow Rate (m ³ /d)	Average Daily Treated Flow Rate (m ³ /d)	Maximum Daily Treated Flow Rate (m ³ /d)	Total Monthly Treated Flow Rate (m ³ /month)
January	956.65	1029.00	895.29	1052.00	27754.00
February	973.82	1461.00	908.29	1142.00	25432.00
March	986.58	1107.00	923.97	1075.00	28643.00
April	957.03	1061.00	900.47	1028.00	27014.00
May	1278.55	1666.00	1205.03	1615.00	37356.00
June	1125.50	1684.00	1051.73	1587.00	31552.00
July	996.32	1164.00	932.71	1125.00	28914.00
August	933.77	1133.00	888.39	1104.00	27540.00
September	850.10	1095.00	814.40	985.00	24432.00
October	851.94	1022.00	814.58	1039.00	25252.00
November	923.77	1140.00	875.50	1002.00	26265.00
December	1087.74	1246.00	1011.97	1227.00	31371.00
2017 Total Treated Flows (m³)				341525.00	



Section 4: System Failures and Correction

The Ministry of Environment conducted an *unannounced* inspection of the Longlac Drinking-Water System on September 20, 2017. There were two non-compliance items identified in the inspection report.

The final inspection rating record for the Longlac Drinking Water System was 92.72%.

Item	Non-Compliance Identified	Compliance Date	Action Being Taken to Address item	Status
1	<p>There was not sufficient monitoring of flow as required by the Municipal Drinking Water License or Drinking Water Works Permit issued under Part V of the SDWA.</p> <p>An incident occurred on August 2, 2017 whereby power supply to the raw water flow meter was disrupted. The meter was not powered from 10:15 to 11:31 (a total of 76 minutes) and during this period of time, the exact volume of raw water taken was unknown.</p> <p>Action(s) Required: Investigation indicated that the raw water meter was tied in with the ground fault and when this was stripped, the raw water meter was inoperable. Power was restored to the meter.</p>	Not Specified	Power restored to the flow meter	Complete
2	<p>Records did not indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water License issued under Part V of the SDWA at all times that water was being supplied to consumers.</p> <p>Filter 1 did not meet the performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month: November 2016 – Filter 1: 92.26%.</p> <p>In August 2016, KGS Group recommended a few minor adjustments to the filter operation, which the engineer considered “filter to waste equivalent”. The operating authority had indicated that they would work towards implementation the recommendations of KGS Group.</p> <p>The owner/operating authority was required by October 31, 2016, to submit a report to the undersigned Inspector detailing the steps taken to implement the modifications recommended by KGS Group.</p> <p>At the time of this inspection, the report had not been provided to the Inspector. The Maintenance Team Lead later verbally advised that alarm set points were lowered (as recommended by KGS).</p>	December 11, 2017	Modifications incorporating the recommendations of the engineer report being incorporated into the procedure for the filters.	Complete

Action(s) Required: Care must be taken to ensure that the process optimization recommended by KGS is followed. By December 11, 2017, the operating authority must provide the inspector with a procedure incorporating the recommendations made by KGS.

Section 5: Conclusion

In the reporting year of 2017, there were six adverse water quality incident (AWQI) reports filed as summarized below.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
7-Jul-17	Other Observation – Loss of pressure due to tie in for installation of new water main.	-	-	Flush, collect two sets of bacteriological samples 24 hours apart.	14-Jul-17
2-Aug-17	Other Observation – Raw water flow meter not working (loss of power)	-	-	Ground fault. Fix meter and put back online.	2-Aug-17
16-Aug-17	Other Observation – Loss of pressure due to hydrant repair. BWA on 50 houses and 4 businesses.	-	-	Flush, collect two sets of bacteriological samples 24 hours apart.	19-Aug-17
2-Oct-17	Physical/Chemical – Filter turbidity not below 0.3 NTU for 95% of monthly readings.	#1 84.14 #2 80.24	%	Filters cleaned. #1 on Sept 26 and #2 on Sept 27. Filter turbidities back to normal.	2-Oct-17
23-Nov-17	Other Observation – Loss of pressure due to water line repair. BWA on 18 houses.	-	-	Flush, collect two sets of bacteriological samples 24 hours apart.	28-Nov-17
1-Dec-17	Physical/Chemical – Filter turbidity not below 0.3 NTU for 95% of monthly readings.	#1 93.83	%	Filter #1 cleaned on Nov 2. Poor performance during inspection on Nov 6. Isolated filter and scheduled to replace media first week of Dec.	1-Dec-17

The inspection found the plant to be producing good quality water. The treated water samples at the plant and in the distribution system were shown to be free of bacteriological contaminants and met the Ontario Drinking Water Quality Standards.

For the operating year of 2017, the Longlac Drinking Water System was able to meet the demand of water use within the town without exceeding the Municipal Drinking Water License and Permit to Take Water.