



February 19, 2019

Mayor Renald Beaulieu and Council
The Corporation of the Municipality of Greenstone
P.O. Box 70
Geraldton, Ontario
P0T 1M0

Re: 2018 Annual Summary Report for the Beardmore Drinking-Water System
2018 Annual Summary Report for the Caramat Drinking-Water System
2018 Annual Summary Report for the Geraldton Drinking-Water System
2018 Annual Summary Report for the Longlac Drinking-Water System
2018 Annual Summary Report for the Nakina Drinking-Water System

Ontario's Drinking-Water Systems Regulation (O.Reg.170/03), made under the *Safe Drinking Water Act, 2002*, requires that the owner of a drinking water system prepare an annual summary for municipalities on the operation of the system and the quality of its water.

The annual summary must cover the period of January 1st to December 31st in a year and must *be prepared not later than March 31st* of the following year. Pursuant to the legislative requirements, enclosed for your records is the 2018 Annual Summary for the Greenstone Drinking-Water Systems.

Pursuant to the legislative requirements, *Schedule 22 Summary Reports for Municipalities*, the annual summary 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)

In addition, Section 12 (1) - 4 - gives the direction that a copy of the annual summary for the system is given, without charge, to every person who requests a copy and be made available for inspection by any member of the public during normal business hours. The reports should be made available at the office of the municipality, or at a location that is accessible to the users of the water system.

These reports were prepared by the Ontario Clean Water Agency on behalf of the Corporation of the Municipality of Greenstone and are based on information kept on record by OCWA at each specific water treatment plant. The report covers the period January 1st through to December 31st 2018.

Yours truly,



Bradley McMahon
Senior Operations Manager
Northwestern Ontario Regional Hub

Copy to: Mark Wright - CAO
Brian Aaltonen – Director of Public Services
Operations Staff – Beardmore WTP
Operations Staff – Caramat WTP
Operations Staff – Geraldton WTP
Operations Staff – Longlac WTP
Operations Staff – Nakina WS

2018 Schedule 22 Annual Summary Report

Caramat Drinking-Water System

February 2019

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 Caramat 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 2018. The Caramat Drinking-Water System is categorized as a Small 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 – Caramat Ward. A copy of the Summary Report is to be provided to the members of the municipal council by March 31st 2019.

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 225-101 Schedule C: System – Specific Conditions 1.0 Performance Limits***, the Caramat 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 **75.2 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 2018, the average monthly raw flow rate was 525.86 m³; the average raw daily flow rate was 17.28 m³, with a maximum raw daily flow rate of 32.50 m³.

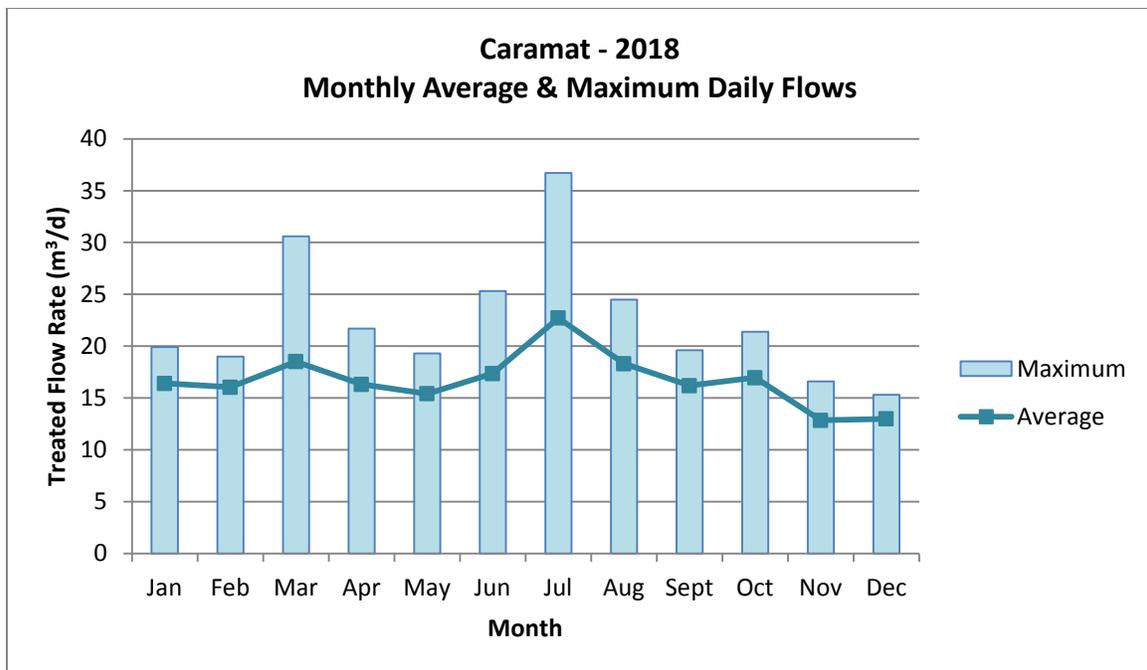
In 2018, the average monthly treated flow rate was 507.48 m³; the average daily treated flow was 16.67 m³ and the maximum daily treated flow for the year was 36.70 m³; this represents 48.8% of the allowable daily volume.

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 2018

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	18.41	22.50	16.40	19.90	508.40
February	17.05	22.30	16.04	19.00	449.00
March	20.32	28.10	18.50	30.60	573.60
April	17.41	21.80	16.31	21.70	489.30
May	16.00	19.10	15.41	19.30	477.70
June	18.12	23.20	17.35	25.30	520.40
July	21.94	32.50	22.72	36.70	704.40
August	17.97	23.10	18.30	24.50	567.40
September	15.84	20.60	16.19	19.60	485.80
October	17.10	22.20	16.96	21.40	525.90
November	13.64	17.50	12.84	16.60	385.30
December	13.52	22.50	12.98	15.30	402.50
2018 Total Treated Flows (m ³)				6089.70	



Section 4: System Failures and Correction

The Ministry of the Environment conducted an *announced* inspection of the Caramat Drinking-Water System on December 4, 2018. There were two non-compliance items identified in the inspection report. The final 2018 inspection rating record for the Caramat Drinking-Water System was 90.16%.

Item	Non-Compliance Identified	Compliance Date	Action Being Taken to Address item	Status
1	<p>Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers. The Standard Operating Procedure entitled "Caramat WTP Recommended GAC Filter Change Requirements" dated January 11, 2016, recommends the GAC to be replaced when two consecutive THM results have reached a level above 70.0 µg/L. This procedure was established because previously, the drinking water system had difficulty maintaining the THM running annual average (RAA) below the Ontario Drinking Water Quality Standard of 100 µg/L.</p> <p>Although the THM RAA for this inspection period has not been exceeded, the GAC filters are not being operated/ maintained as recommended in the SOP. More frequent change out of the GAC shows that the THM values within the distribution system remain below the Ontario Drinking Water Quality Standard.</p> <p>The following sample results were above 70.0 µg/L: April 3, 2018 – 70.8 µg/L May 1, 2018 – 93.8 µg/L June 6, 2018 – 106.0 µg/L July 3, 2018 – 102.0 µg/L August 7, 2018 – 111.0 µg/L Following receipt of the May 1, 2018 sample results, the GAC media should have been changed. Five consecutive results above 70.0 µg/L were received before the GAC media was changed out on August 22, 2018.</p> <p>Action(s) Required: Effective immediately, the owner and operating authority must ensure that the drinking water system is operated and maintained in a fit state of repair.</p> <p>By December 21, 2018, the owner and operating authority must submit to the undersigned officer a plan that outlines the steps that will be taken to achieve the above requirement. In accordance with the Safe Drinking Water Act,</p>	2018/12/21	<p>The GAC finishing filter is changed to control plant THM's. The procedure developed in the past has a trigger level to change the GAC. The operator did not change the GAC to determine if the life of the GAC could be extended but remain within the regulated levels. The GAC will be changed as per the procedure.</p>	Complete

Section 11 (1), every owner of a municipal drinking water system or a regulated non-municipal drinking water system and, if an operating authority is responsible for the operation of the system, the operating authority for the system shall ensure the following:

2. That, at all times in which it is in service, the drinking water system,

- i. is operated in accordance with the requirements under this Act,
- ii. is maintained in a fit state of repair, and
- iii. satisfies the requirements of the standards prescribed for the system or the class of systems to which the system belongs.

2 **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was not performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and/or was not recording data with the prescribed format.**

On six occasions over the course of the inspection review period, distribution chlorine residual readings from the analyzer located in the Rec Centre were not recorded due to extended periods of power outages or communication failures. The analyzer records data until the battery backup power supply is exhausted.

Data gaps are as follows:

March 13, 2018 - Communication error/failure – no records from 10:39 to 13:20

April 27, 2018 - Extended power failure – no records from 00:02 to 06:00

June 24, 2018 - Extended power failure – no records from 10:15 to 17:25

July 22, 2018 - Communication error/failure – no records from 07:30 to 10:05

September 28, 2018 - Extended power failure – no records from 11:23 to 12:50

October 4, 2018 - Extended power failure – no records from 02:40 to 11:20

Action(s) Required:

ACTION COMPLETED: The operating authority advised that the analyzer would be removed and that distribution grab sampling will be conducted in accordance with Schedule 7-2.(5) and 7-2.(6).

The inspector confirmed with the operating authority that the analyzer was removed on October 18, 2018.

- The analyzer was not in the DWWP and operations wished to remove from the system due to the operational issues in the installed location. The weekly residuals were being collected as per the regulation. The analyzer was removed after the inspection.

Completed

Section 5: Conclusion

In the reporting year of 2018, there were no adverse water quality incident (AWQI) report filed as summarized in the below table.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
N/A	N/A	N/A	N/A	N/A	N/A

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 2018, the Caramat Drinking-Water System was able to meet the demand of water use within the town without exceeding the Municipal Drinking Water Licence and Permit to Take Water.