



March 27, 2017

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

Re: 2016 Annual Summary Report for the Beardmore Drinking-Water System
2016 Annual Summary Report for the Caramat Drinking-Water System
2016 Annual Summary Report for the Geraldton Drinking-Water System
2016 Annual Summary Report for the Longlac Drinking-Water System
2016 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 2016 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 2016.

Yours truly,



Bradley McMahon
Senior Operations Manager
Northwestern Ontario 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

2016 Schedule 22 Annual Summary Report

Caramat Drinking-Water System

March 2017

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 2016. 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 2017.

SECTION 2: WHAT DOES THE 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:

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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 $75.2 \text{ m}^3 / \text{day}$.

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 2016, the average monthly raw flow rate was 610.76 m^3 ; the average raw daily flow rate was 20.28 m^3 , with a maximum raw daily flow rate of 39.70 m^3 .

In 2016, the average monthly treated flow rate was 601.72 m^3 ; the average daily treated flow was 19.96 m^3 and the maximum daily treated flow for the year was 42.90 m^3 ; this represents 57.0% of the allowable daily volume.

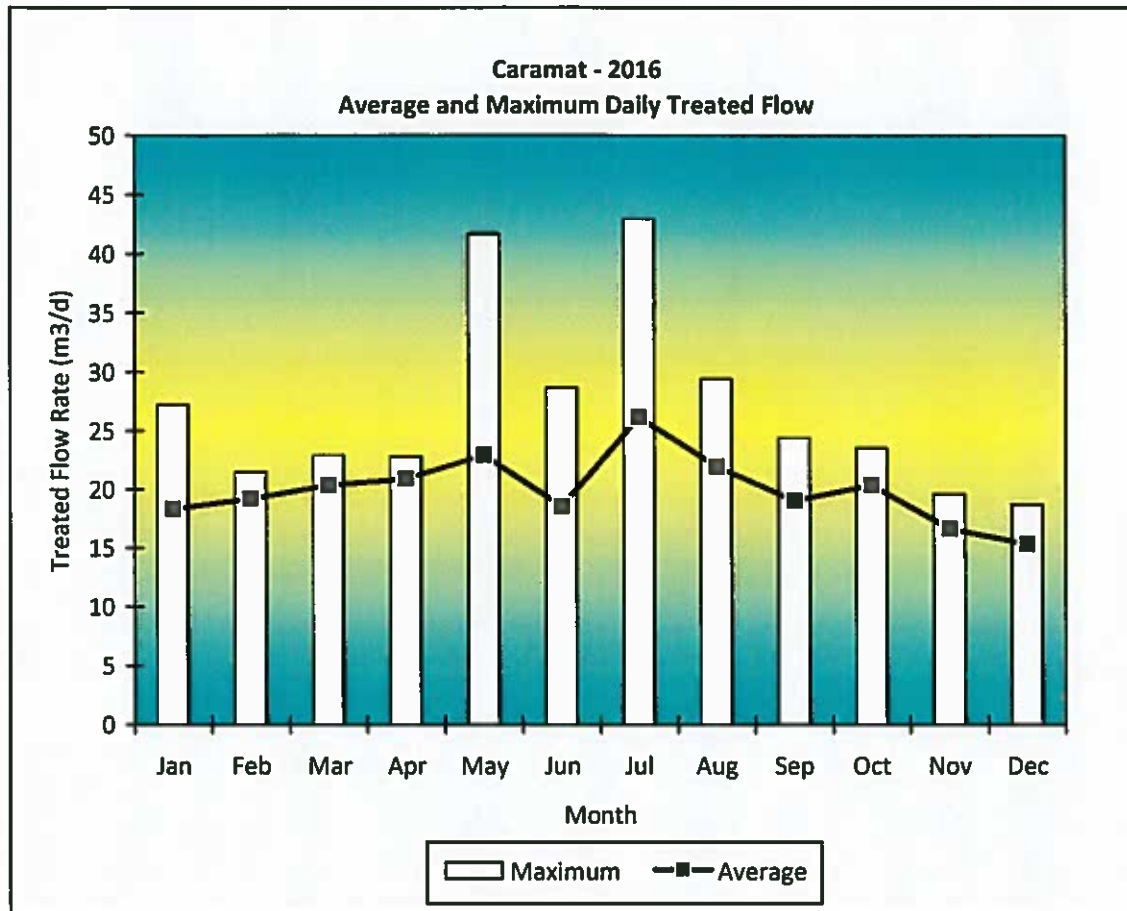
A summary of raw and treated flows, including maximum raw flow into the treatment system as well as treated average, maximum and total flow rates are included in the tables below.

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 2016

Month	Average Daily Raw Flow Rate (m³/d)	Maximum Daily Raw Flow Rate (m³/d)	Average Daily Treated Flow Rate (m³/d)	Maximum Daily Treated Flow Rate (m³/d)	Total Monthly Treated Flow Rate (m³/ month)
January	18.68	25.60	18.32	27.20	568.00
February	19.35	22.70	19.20	21.50	556.80
March	20.09	22.70	20.34	22.90	630.50
April	20.55	23.00	20.87	22.80	626.00
May	22.58	35.80	22.88	41.70	709.30
June	19.32	24.40	18.55	28.60	463.70
July	24.88	39.70	26.13	42.90	809.90
August	22.33	38.10	21.92	29.40	679.60
September	30.76	29.30	19.02	24.40	570.70
October	21.82	24.20	20.33	23.50	630.10
November	17.33	20.60	16.66	19.60	499.70
December	15.61	19.30	15.36	18.70	476.30
	2016 Total Treated Flows (m³)				7220.60

Comparison of Monthly Average and Maximum Treated Flows for 2016



SECTION 4: SYSTEM FAILURES AND CORRECTIONS

The Ministry of the Environment conducted an *announced* inspection of the Caramat Drinking-Water System on August 17 2016

The final 2016 inspection rating record for the Caramat Drinking-Water System was 100%.

SECTION 5: CONCLUSION

In the reporting year of 2016, there were three adverse water quality incident (AWQI) reports filed.

<i>Incident Date</i>	<i>Parameter</i>	<i>Result</i>	<i>Unit of Measure</i>	<i>Corrective Action</i>	<i>Corrective Action Date</i>
21-Jun-16	Other Observation - Loss of data from Distribution analyzer June 10 -18			Install new internet modem to transmit data to SCADA	21-Jun-16
07-Sep-16	Other Observation - Loss of data from Distribution analyzer Sept 5 - 6			Reprogram SCADA pack to correct data logging	7-Sep-16
06-Oct-16	Other observation - Loss of Pressure system wide due to PLC power supply failure			Replaced power supply. Sample for 2 sets of Bacteriological samples	13-Oct-16

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 2016, 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.