

February 2024

Reeve James Gibson and Council
The Township of Chapple
P.O. Box 4
Barwick, Ontario
POW 1A0

Re: 2023 Annual Summary Report for the Barwick 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 2023 Annual Summary for the Barwick Drinking-Water System.

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.

This report was prepared by the Ontario Clean Water Agency on behalf of the Township of Chapple and is based on information kept on record by OCWA at the Barwick Drinking-Water System. The report covers the period January 1st through to December 31st 2023.

Yours truly,

A handwritten signature in black ink that reads "Mike Dowhoszya". The signature is written in a cursive, flowing style.

Mike Dowhoszya
Senior Operations Manager
Northwestern Ontario Regional Hub
807-271-1602

Copy to: Cindy Nielson – CAO/Clerk Treasurer
Operations Staff – Barwick Well Supply

2023 Schedule 22 Annual Summary Report

Barwick Drinking-Water System

February 2024

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 Barwick 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 2023. The Barwick 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 Township of Chapple. A copy of the Summary Report is to be provided to the members of the municipal council by March 31st 2024.

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 285-101 Schedule C: System – Specific Conditions 1.0 Performance Limits***, the Barwick 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 **273 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 2023, the average monthly raw flow rate was 2,123.37 m³; the average raw daily flow rate was 77.68 m³, with a maximum raw daily flow rate of 146.22 m³.

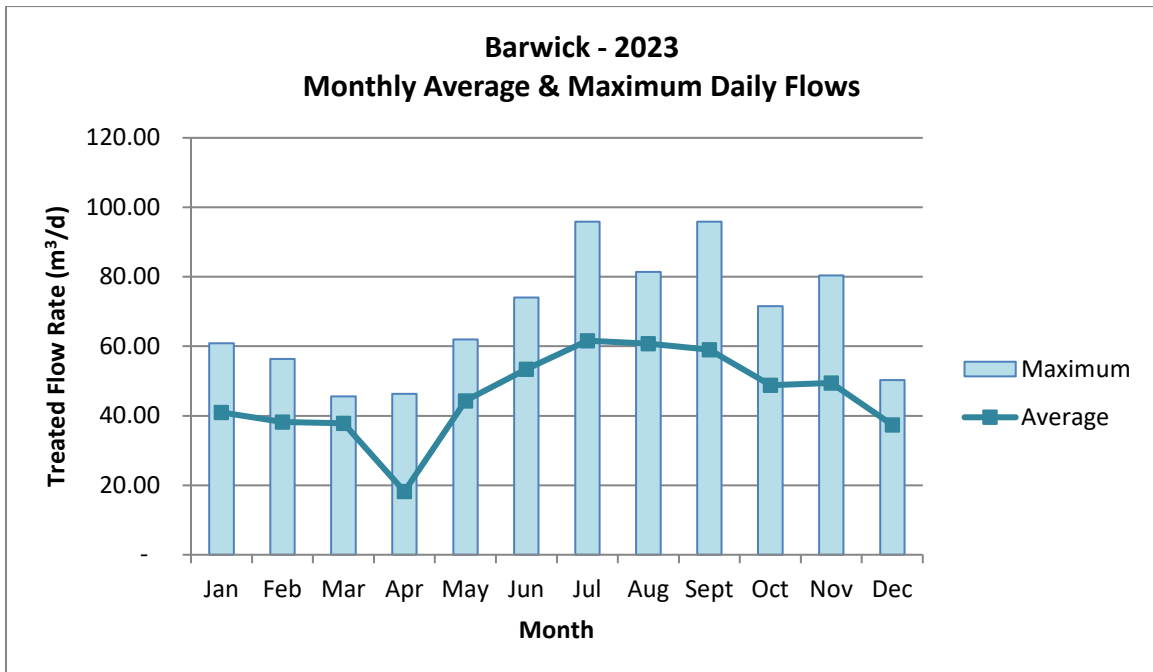
In 2023, the average monthly treated flow rate was 1,396.63 m³; the average daily treated flow rate was 45.86 m³; and the maximum daily treated flow rate for the year was 95.86 m³ representing 35% of the allowable daily volume.

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 flows directed to the treatment system exceed the rated capacity for this system.

Monthly Raw & Treated Flow Rates for 2023

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	67.14	97.64	41.02	60.88	1,271.61
February	103.43	139.41	38.26	56.35	1,071.18
March	91.62	126.90	37.86	45.54	1,173.61
April	46.85	94.92	18.21	46.32	546.40
May	68.38	90.34	44.33	61.97	1,374.22
June	79.35	114.81	53.43	74.06	1,602.81
July	81.36	86.28	61.61	95.86	1,909.96
August	81.14	84.86	60.75	81.45	1,883.23
September	76.87	92.92	59.05	95.84	1,771.39
October	67.82	76.87	48.79	71.60	1,512.50
November	74.20	80.74	49.45	80.44	1,483.63
December	93.99	146.22	37.39	50.30	1,158.96
2023 Total Treated Flows (m ³)				16,759.50	



Section 4: System Failures and Correction

The Ministry of Environment conducted an *announced* inspection of the Barwick Drinking Water System on May 17, 2023. The final inspection report identified six non-compliances as summarized in the table below.

The 2023 final inspection rating record for the Barwick Drinking Water System was 86.10%.

Item	Non-Compliance Identified	Compliance Date	Action Being Taken to Address item	Status
1	<p>All operators did not possess the required certification. O. Reg. 128/04, section 22, requires that the owner or operating authority of a subsystem shall ensure that every operator employed in the subsystem holds a certificate applicable to that type of subsystem. During the review period, one of the operator's Class 2 Drinking Water Certification expired. Their certificate expired on March 31, 2023; however, this individual continued to be designated as the ORO from April 3 to 5, 2023, the OIC on April 3, 2023 and the after hours ORO and OIC from April 3 to 12, 2023. On April 12, 2023, the operating authority became aware of the operator's expired certificate. Since this date, this operator has not worked in the facility and is no longer employed by the operating authority.</p>	N/A	N/A	Complete
2	<p>Records or other record keeping mechanisms did not confirm that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5. O. Reg. 170/03, Schedule 7, section 7-5 requires that the owner of a drinking water system and the operating authority for the system shall ensure that every test required by Schedule 7 is conducted by a certified operator or a water quality analyst. Tests required by this schedule include taking a distribution chlorine residual. On April 3, 2023, a distribution chlorine residual was taken by an operator with an expired operator certificate.</p>	N/A	N/A	Complete
3	<p>All changes to the system registration information were not provided within ten (10) days of the change. At the time of the inspection, contact information contained in the DWIS profile was not</p>	N/A	N/A	Complete

Item	Non-Compliance Identified	Compliance Date	Action Being Taken to Address item	Status
	up to date.			
4	<p>Measures were not in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA.</p> <p>The Barwick Municipal Drinking Water License (MDWL), Schedule B, section 16.2.8 and section 16.2.9 requires the Operations and Maintenance Manual to include an inspection well schedule and well inspection and maintenance procedures. In addition, section 16.4 of the MDWL states that all of the procedures included or referenced within the operations and maintenance manual must be implemented.</p> <p>During the review period it was confirmed that operators were not measuring the static level of the wells every 3 months or inspecting and testing all electrical components annually, as required by the facility's Well Field Standard Operating Procedure.</p>	2023-09-30	Revise SOP and complete well field maintenance records and annual checks.	Complete
5	<p>Operators were not examining continuous monitoring test results or they were not examining the results within 72 hours of the test. O. Reg. 170/03, Schedule 6, section 6-5, (1)(3), requires that the continuous treated water chlorine residual records be reviewed by a certified operator every 72 hours. Typically, operators document daily, during the week, and after the weekend, that the continuous data was reviewed; however, on occasion, it was documented in the log book after 72 hours that the data had been reviewed.</p> <p>During the review period, this was observed on 11 occasions. It has been explained by the operating authority that during these instances, an operator was on-site daily during the 72 hour period and completed daily rounds, which include reviewing the continuous data; however, they did not document this until after 72 hours had passed, despite the facility's Stand Operating Procedure requiring them to do so. Based on the information provided it cannot be confirmed that the continuous data review was completed within the required timeframe during these instances.</p>	2023-08-04	Operators to review 72Hr Review SOP and provide training record to the undersigned inspector	Complete
6	All continuous monitoring equipment utilized for	N/A	N/A	Complete

Item	Non-Compliance Identified	Compliance Date	Action Being Taken to Address item	Status
	sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were not equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6. See pg. 15 (of the inspection) for a description of the inspections findings.			

Section 5: Conclusion

In the reporting year of 2023, there were four adverse water quality incident (AWQI) reports filed as summarized in the table below.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
2023-06-02	Low Chlorine and Loss of pressure	0.0004	mg/L	Collect 2 sets of Bacti Samples	2023-06-09
2023-06-27	Low Chlorine and Loss of pressure		mg/L	Collect 2 sets of Bacti Samples	2023-07-09
2023-09-08	BWA Issued by Township			Find/Correct leak allowing for WTP to keep up with demand	
2023-12-12	THM RAA Exceedance	110.9	ug/l		N/A

For the operating year of 2023, the Barwick 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.