

# Omemee Drinking Water System

---

Waterworks # 210002227  
System Category – Small Municipal Residential

## Annual Water Report

Prepared For: The City of Kawartha Lakes

Reporting Period of January 1<sup>st</sup> – December 31<sup>st</sup>, 2023

Issued: February 21, 2024

Revision: 0

Operating Authorities:



This report has been prepared to satisfy the annual reporting requirements in O. Reg. 170/03 Section 11 and Schedule 22

## Table of Contents

|                                                          |    |
|----------------------------------------------------------|----|
| Annual Water Report .....                                | 1  |
| Report Availability .....                                | 1  |
| Compliance Report Card .....                             | 1  |
| System Process Description .....                         | 1  |
| Raw Source .....                                         | 1  |
| Treatment .....                                          | 2  |
| Treatment Chemicals used during the reporting year ..... | 2  |
| Summary of Non-Compliance.....                           | 2  |
| Adverse Water Quality Incidents.....                     | 2  |
| Non-Compliance .....                                     | 2  |
| Non-Compliance Identified in a Ministry Inspection ..... | 2  |
| Flows .....                                              | 2  |
| Raw Water Flows.....                                     | 2  |
| Well #1 Total Monthly Flows .....                        | 3  |
| Well #1 Monthly Rated Flows .....                        | 3  |
| Well #2 Total Monthly Flows .....                        | 4  |
| Well #2 Monthly Rated Flows .....                        | 4  |
| Treated Water Flows .....                                | 5  |
| Treated Water Monthly Flows – Rated Capacity .....       | 5  |
| Annual Total Treated Water Flow Comparison.....          | 5  |
| Regulatory Sample Results Summary .....                  | 6  |
| Microbiological Testing .....                            | 6  |
| Operational Testing .....                                | 6  |
| Inorganic Parameters .....                               | 7  |
| Schedule 15 Sampling.....                                | 8  |
| Organic Parameters.....                                  | 8  |
| Additional Legislated Samples.....                       | 9  |
| Major Maintenance Summary.....                           | 10 |
| WTRS Submission Confirmation .....                       | A  |

## Report Availability

This system does not serve more than 10,000 residences. The annual reports will be available to residents at the City of Kawartha Lakes Public Works Administration Office and on the City's website at: [www.kawarthalakes.ca](http://www.kawarthalakes.ca). Notification that reports are available free of charge will be made on the City of Kawartha Lakes website. The City of Kawartha Lakes Public Works Administration Office is located at 322 Kent Street West in Lindsay, Ontario.

## Compliance Report Card

**Drinking Water System Number:** 210002227

**Drinking Water System Name:** Omemee DWS

**Drinking Water System Owner:** City of Kawartha Lakes

**Drinking Water System Category:** Small Municipal Residential

**Period Being Reported:** January 1, 2023 - December 31, 2023

|                                                                 | # of Events | Date             | Details                                                                                                   |
|-----------------------------------------------------------------|-------------|------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Health &amp; Safety</b>                                      |             |                  |                                                                                                           |
| Number of Incidents                                             | 0           |                  |                                                                                                           |
| <b>Drinking Water</b>                                           |             |                  |                                                                                                           |
| MECP Inspections                                                | 1           | December 8, 2023 | Announced - Focused Drinking Water Inspection, still in progress at the time of this report being issued. |
| AWQI's                                                          | 0           |                  |                                                                                                           |
| Number of Non-Compliances identified during Ministry Inspection | 0           |                  |                                                                                                           |
| Number of Boil Water Advisories                                 | 0           |                  |                                                                                                           |

## System Process Description

### Raw Source

The water supply for the DWS comes from two (2) groundwater wells that are designated as non-GUDI (groundwater under direct influence).

### Treatment

The treatment system consists of the following:

- An underground clearwell
- Sodium hypochlorite disinfection system
- Iron sequestering system

- High lift pumps
- Hydropneumatic tanks
- Stand-by diesel generator on-site

Treatment Chemicals used during the reporting year:

| Chemical Name       | Use               | Supplier                 |
|---------------------|-------------------|--------------------------|
| Sodium Hypochlorite | Disinfection      | Jutzi Water Technologies |
| Sodium Silicate     | Iron sequestering | Jutzi Water Technologies |

## Summary of Non-Compliance

### Adverse Water Quality Incidents

There were no adverse water quality incidents reported during the reporting period.

### Non-Compliance(s)

There were no non-compliance issues reported during the reporting period

### Non-Compliance(s) Identified in a Ministry Inspection

There were no non-compliance issues identified during the Ministry Inspection.

## Flows

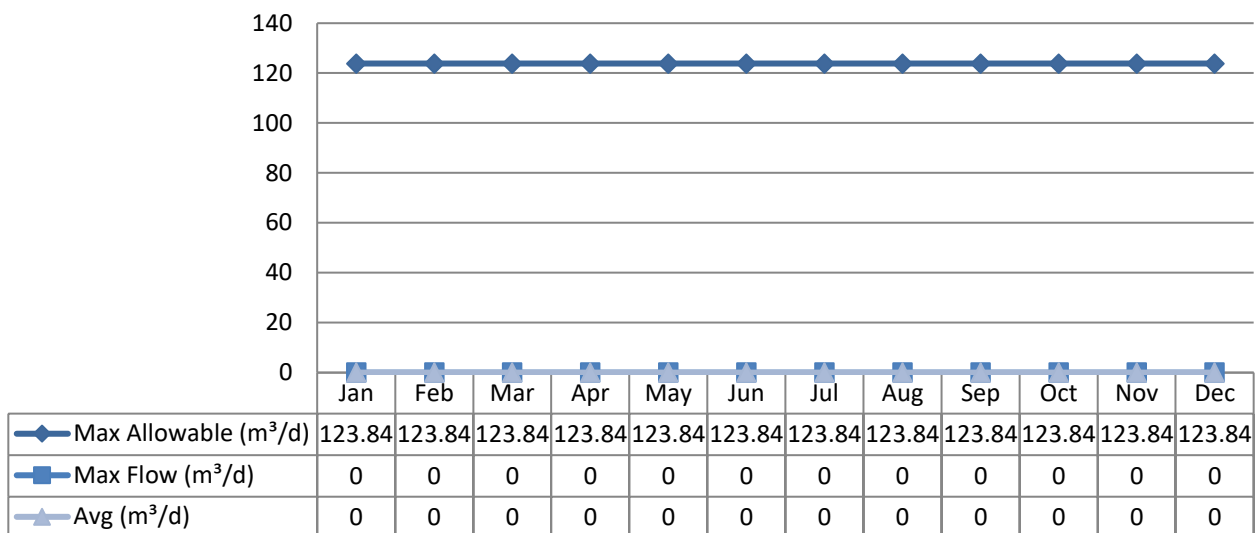
The Omemee Drinking Water System is operating on average under half the rated capacity.

### Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2023 Raw Flow Data was submitted to the Ministry electronically under permit #6634-B23PER. A copy of the confirmation is included in Appendix A. The Permit to Take Water compliance criteria is in litres per minute (L/min) but for the purposes of this report the flow rate is reported in litres per second (L/sec) based on industry standard for flow monitoring recording.

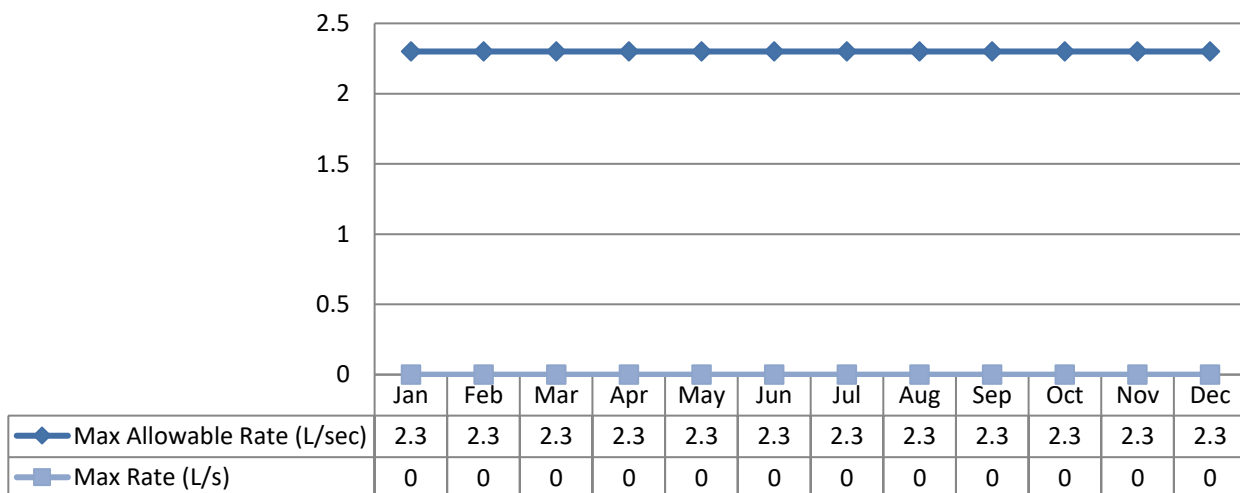
Total Monthly Flows (m<sup>3</sup>/d)

Max Allowable PTTW – Well #1



Monthly Rated Flows (L/s)

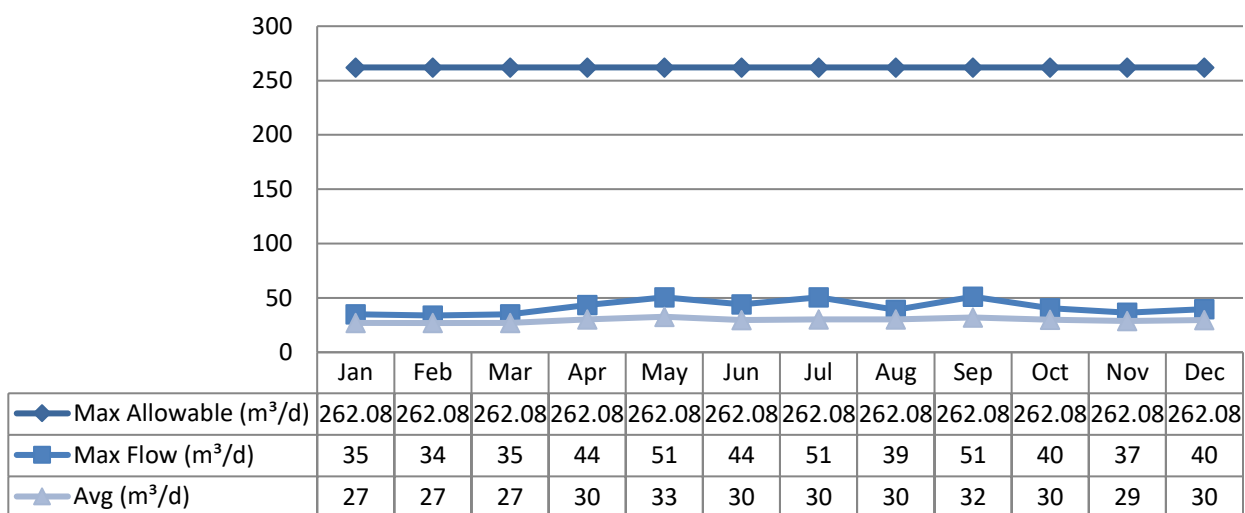
Max Allowable Rate – PTTW – Well #1



**Note:** Well #1 was not in production during the reporting period.

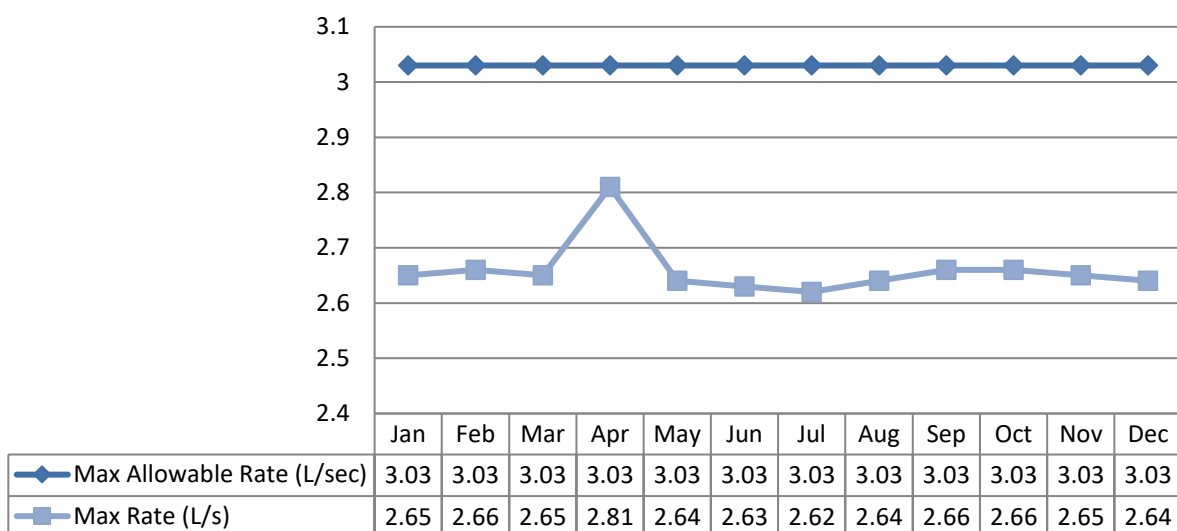
Total Monthly Flows (m<sup>3</sup>/d)

Max Allowable PTTW – Well #2



Monthly Rated Flows (L/s)

Max Allowable Rate – PTTW – Well #2

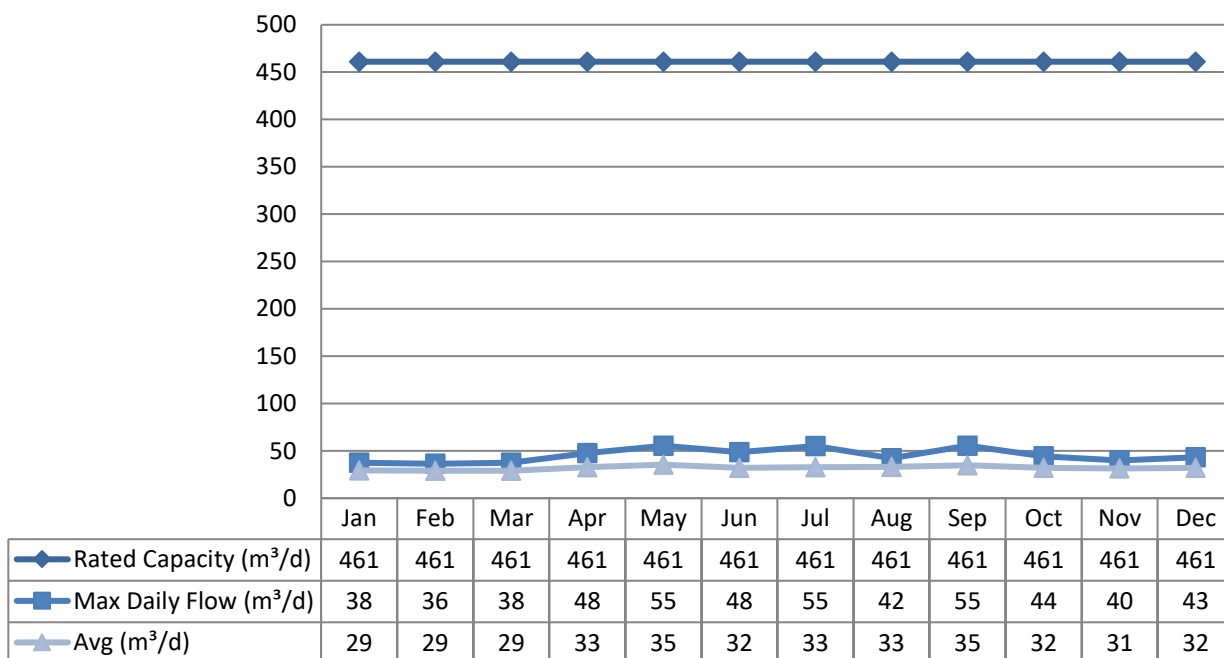


## Treated Water Flows

The Treated Water flows are regulated under the Municipal Drinking Water Licence #141-108.

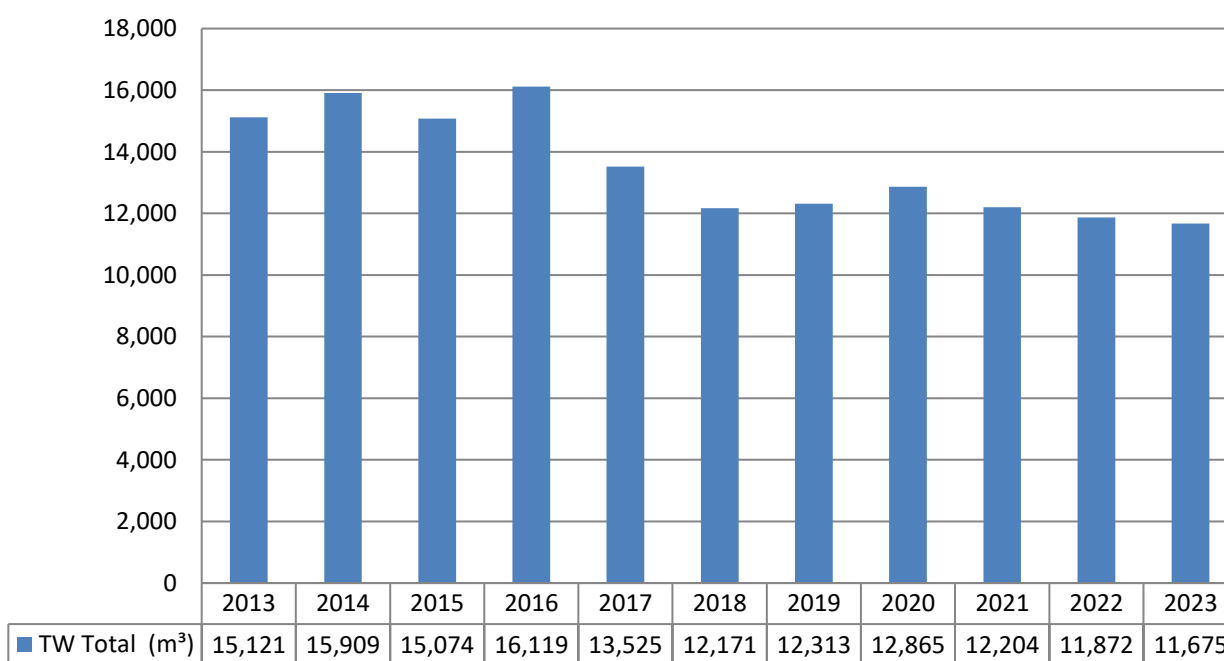
### Monthly Rated Flows

Rated Capacity – MDWL



### Annual Total Flow Comparison

Total Annual m³



## Regulatory Sample Results Summary

### Microbiological Testing

(completed under Schedule 10, 11 or 12 of Ontario Regulation 170/03, during the reporting period).

|              | No. of Samples Collected | Range of E. Coli Results | Range of E. Coli Results | Range of Total Coliform Results | Range of Total Coliform Results | Range of HPC Results | Range of HPC Results |
|--------------|--------------------------|--------------------------|--------------------------|---------------------------------|---------------------------------|----------------------|----------------------|
|              |                          | Min                      | Max                      | Min                             | Max                             | Min                  | Max                  |
| Raw Well 1   | N/A                      |                          |                          |                                 |                                 |                      |                      |
| Raw Well 2   | 29                       | 0                        | 0                        | 0                               | 31                              |                      |                      |
| Treated      | 1                        | 0                        | 0                        | 0                               | 0                               |                      |                      |
| Distribution | 52                       | 0                        | 0                        | 0                               | 0                               | 0                    | 2                    |

**Note:** Well 1 was not in production during the reporting period.

### Operational Testing

(completed under Schedule 7, 8 or 9 of Ontario Regulation 170/03, during the reporting period).

| Parameter                                   | Number of Samples Collected | Range of Results Minimum | Range of Results Maximum |
|---------------------------------------------|-----------------------------|--------------------------|--------------------------|
| Turbidity Well 1 (NTU)                      | N/A                         |                          |                          |
| Turbidity Well 2 (NTU)                      | 12                          | 0.061                    | 0.44                     |
| Turbidity – TW (NTU)                        | 8760                        | 0                        | 2                        |
| Chlorine                                    | 8760                        | 0                        | 5                        |
| Fluoride (If the DWS provides fluoridation) | N/A                         | N/A                      | N/A                      |

**Note:** Well 1 was not in production during the reporting period.

**Note:** Record the unit of measure if it is **not** milligrams per litre.

**Note:** For continuous monitors 8760 is used as the number of samples. Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. All spikes are reviewed for compliance with O. Reg. 170/03, did not indicate a true exceedance. A true exceedance would be documented within this report.

### Inorganic Parameters

These parameters are tested as a requirement under O. Reg. 170/03. Sodium and Fluoride are required to be tested every five years. Nitrate and Nitrite are tested quarterly and the metals are tested every three years as required under O. Reg. 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

- MAC = Maximum Allowable Concentration as per O. Reg. 169/03
- MDL = Method Detection Limit

| Treated Water Parameter      | Sample Date (yyyy/mm/dd) | Sample Result | MAC    | Exceedance MAC | Exceedance ½ MAC |
|------------------------------|--------------------------|---------------|--------|----------------|------------------|
| Antimony: Sb (ug/L) - TW     | 2020/01/06               | <MDL<br>0.09  | 6.0    | No             | No               |
| Arsenic: As (ug/L) - TW      | 2020/01/06               | <MDL<br>0.2   | 10.0   | No             | No               |
| Barium: Ba (ug/L) - TW       | 2020/01/06               | 206.0         | 1000.0 | No             | No               |
| Boron: B (ug/L) - TW         | 2020/01/06               | 14.0          | 5000.0 | No             | No               |
| Cadmium: Cd (ug/L) - TW      | 2020/01/06               | <MDL<br>0.003 | 5.0    | No             | No               |
| Chromium: Cr (ug/L) - TW     | 2020/01/06               | 0.12          | 50.0   | No             | No               |
| Mercury: Hg (ug/L) - TW      | 2020/01/06               | <MDL<br>0.01  | 1.0    | No             | No               |
| Selenium: Se (ug/L) - TW     | 2020/01/06               | <MDL<br>0.04  | 50.0   | No             | No               |
| Uranium: U (ug/L) - TW       | 2020/01/06               | 0.012         | 20.0   | No             | No               |
| <b>Additional Inorganics</b> |                          |               |        |                |                  |
| Fluoride (mg/L) - TW         | 2020/01/06               | 0.14          | 1.5    | No             | No               |
| Nitrite (mg/L) - TW          | 2023/01/03               | <MDL<br>0.003 | 1.0    | No             | No               |
| Nitrite (mg/L) - TW          | 2023/04/03               | <MDL<br>0.003 | 1.0    | No             | No               |
| Nitrite (mg/L) - TW          | 2023/07/10               | <MDL<br>0.003 | 1.0    | No             | No               |
| Nitrite (mg/L) - TW          | 2023/10/10               | <MDL<br>0.003 | 1.0    | No             | No               |
| Nitrate (mg/L) - TW          | 2023/01/03               | 0.007         | 10.0   | No             | No               |
| Nitrate (mg/L) - TW          | 2023/04/03               | <MDL<br>0.006 | 10.0   | No             | No               |
| Nitrate (mg/L) - TW          | 2023/07/10               | 0.007         | 10.0   | No             | No               |
| Nitrate (mg/L) - TW          | 2023/10/10               | <MDL<br>0.006 | 10.0   | No             | No               |
| Sodium: Na (mg/L) - TW       | 2020/01/06               | 21.4          | 20*    | Yes            | Yes              |

\*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

### Schedule 15 Sampling

The Schedule 15 Sampling is required under O. Reg. 170/03. This system is under

reduced sampling. No plumbing samples were collected.

| Distribution System | Number of Sampling Points | Number of Samples | Range of Results Minimum | Range of Results Maximum | MAC (ug/L) | Number of Exceedances |
|---------------------|---------------------------|-------------------|--------------------------|--------------------------|------------|-----------------------|
| Alkalinity (mg/L)   | 1                         | 2                 | 217                      | 218                      | N/A        | N/A                   |
| pH                  | 1                         | 2                 | 7.45                     | 7.69                     | N/A        | N/A                   |
| Lead (ug/l)         | 1                         | 2                 | 0.27                     | 0.28                     | 10         | 0                     |

### **Organic Parameters**

These parameters are tested as a requirement under O. Reg. 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

| Treated Water Parameter                             | Sample Date (yyyy/mm/dd) | Sample Result | MAC    | Exceedance MAC | Exceedance ½ MAC |
|-----------------------------------------------------|--------------------------|---------------|--------|----------------|------------------|
| Alachlor (ug/L) - TW                                | 2020/01/06               | <MDL 0.02     | 5.00   | No             | No               |
| Atrazine + N-dealkylated metabolites (ug/L) - TW    | 2020/01/06               | <MDL 0.01     | 5.00   | No             | No               |
| Azinphos-methyl (ug/L) - TW                         | 2020/01/06               | <MDL 0.05     | 20.00  | No             | No               |
| Benzene (ug/L) - TW                                 | 2020/01/06               | <MDL 0.32     | 1.00   | No             | No               |
| Benzo(a)pyrene (ug/L) - TW                          | 2020/01/06               | <MDL 0.004    | 0.01   | No             | No               |
| Bromoxynil (ug/L) - TW                              | 2020/01/06               | <MDL 0.33     | 5.00   | No             | No               |
| Carbaryl (ug/L) - TW                                | 2020/01/06               | <MDL 0.05     | 90.00  | No             | No               |
| Carbofuran (ug/L) - TW                              | 2020/01/06               | <MDL 0.01     | 90.00  | No             | No               |
| Carbon Tetrachloride (ug/L) - TW                    | 2020/01/06               | <MDL 0.17     | 2.00   | No             | No               |
| Chlorpyrifos (ug/L) - TW                            | 2020/01/06               | <MDL 0.02     | 90.00  | No             | No               |
| Diazinon (ug/L) - TW                                | 2020/01/06               | <MDL 0.02     | 20.00  | No             | No               |
| Dicamba (ug/L) - TW                                 | 2020/01/06               | <MDL 0.2      | 120.00 | No             | No               |
| 1,2-Dichlorobenzene (ug/L) - TW                     | 2020/01/06               | <MDL 0.41     | 200.00 | No             | No               |
| 1,4-Dichlorobenzene (ug/L) - TW                     | 2020/01/06               | <MDL 0.36     | 5.00   | No             | No               |
| 1,2-Dichloroethane (ug/L) - TW                      | 2020/01/06               | <MDL 0.35     | 5.00   | No             | No               |
| 1,1-Dichloroethylene (ug/L) - TW                    | 2020/01/06               | <MDL 0.33     | 14.00  | No             | No               |
| Dichloromethane (Methylene Chloride) (ug/L) - TW    | 2020/01/06               | <MDL 0.35     | 50.00  | No             | No               |
| 2,4-Dichlorophenol (ug/L) - TW                      | 2020/01/06               | <MDL 0.15     | 900.00 | No             | No               |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW | 2020/01/06               | <MDL 0.19     | 100.00 | No             | No               |
| Diclofop-methyl (ug/L) - TW                         | 2020/01/06               | <MDL 0.4      | 9.00   | No             | No               |
| Dimethoate (ug/L) - TW                              | 2020/01/06               | <MDL 0.06     | 20.00  | No             | No               |
| Diquat (ug/L) - TW                                  | 2020/01/06               | <MDL 1.0      | 70.00  | No             | No               |
| Diuron (ug/L) - TW                                  | 2020/01/06               | <MDL 0.03     | 150.00 | No             | No               |
| Glyphosate (ug/L) - TW                              | 2020/01/06               | <MDL 1.0      | 280.00 | No             | No               |
| Malathion (ug/L) - TW                               | 2020/01/06               | <MDL 0.02     | 190.00 | No             | No               |

| <b>Treated Water Parameter</b>                   | <b>Sample Date<br/>(yyyy/mm/dd)</b> | <b>Sample<br/>Result</b> | <b>MAC</b> | <b>Exceedance<br/>MAC</b> | <b>Exceedance<br/>½ MAC</b> |
|--------------------------------------------------|-------------------------------------|--------------------------|------------|---------------------------|-----------------------------|
| 2-Methyl-4chlorophenoxyacetic Acid (MCPA)        | 2020/01/06                          | <MDL 0.12                | 100.0      | No                        | No                          |
| Metolachlor (ug/L) - TW                          | 2020/01/06                          | <MDL 0.01                | 50.00      | No                        | No                          |
| Metribuzin (ug/L) - TW                           | 2020/01/06                          | <MDL 0.02                | 80.00      | No                        | No                          |
| Monochlorobenzene (Chlorobenzene) (ug/L) - TW    | 2020/01/06                          | <MDL 0.3                 | 80.00      | No                        | No                          |
| Paraquat (ug/L) - TW                             | 2020/01/06                          | <MDL 1.0                 | 10.00      | No                        | No                          |
| PCB (ug/L) - TW                                  | 2020/01/06                          | <MDL 0.04                | 3.00       | No                        | No                          |
| Pentachlorophenol (ug/L) - TW                    | 2020/01/06                          | <MDL 0.15                | 60.00      | No                        | No                          |
| Phorate (ug/L) - TW                              | 2020/01/06                          | <MDL 0.01                | 2.00       | No                        | No                          |
| Picloram (ug/L) - TW                             | 2020/01/06                          | <MDL 1.0                 | 190.00     | No                        | No                          |
| Prometryne (ug/L) - TW                           | 2020/01/06                          | <MDL 0.03                | 1.00       | No                        | No                          |
| Simazine (ug/L) - TW                             | 2020/01/06                          | <MDL 0.01                | 10.00      | No                        | No                          |
| Terbufos (ug/L) - TW                             | 2020/01/06                          | <MDL 0.01                | 1.00       | No                        | No                          |
| Tetrachloroethylene (ug/L) - TW                  | 2020/01/06                          | <MDL 0.35                | 10.00      | No                        | No                          |
| 2,3,4,6-Tetrachlorophenol (ug/L) - TW            | 2020/01/06                          | <MDL 0.2                 | 100.00     | No                        | No                          |
| Triallate (ug/L) - TW                            | 2020/01/06                          | <MDL 0.01                | 230.00     | No                        | No                          |
| Trichloroethylene (ug/L) - TW                    | 2020/01/06                          | <MDL 0.44                | 5.00       | No                        | No                          |
| 2,4,6-Trichlorophenol (ug/L) - TW                | 2020/01/06                          | <MDL 0.25                | 5.00       | No                        | No                          |
| Trifluralin (ug/L) - TW                          | 2020/01/06                          | <MDL 0.02                | 45.00      | No                        | No                          |
| Vinyl Chloride (ug/L) - TW                       | 2020/01/06                          | <MDL 0.17                | 1.00       | No                        | No                          |
| <b>Distribution Water</b>                        |                                     |                          |            |                           |                             |
| Trihalomethane: Total (ug/L) Annual Average - DW | 2023                                | 15.00                    | 100        | No                        | No                          |
| HAA Total (ug/L) Annual Average - DW             | 2023                                | 5.3                      | 80         | No                        | No                          |

MAC = Maximum Allowable Concentration as per O. Reg. 169/03

MDL = Method Detection Limit

### **Additional Legislated Samples**

There were no additional legislated samples required to report during this reporting period.

**Major Maintenance Summary incurred to install, repair or replace required equipment**

| <b>WO #</b> | <b>Description</b>                                              |
|-------------|-----------------------------------------------------------------|
| 2636729     | Well #3 Offline, Guide Assessment for Previously Installed Well |
| 3201628     | Facility Lighting, Replacement                                  |
| 3244820     | Alarm Dialer Key Pad, Failing                                   |
| 3245357     | Clear Well Covers, Repair                                       |

# Appendix A

## WTRS Submission Confirmation



Ministry of the Environment,  
Conservation and Parks

| [WT DATA](#) | [USER PROFILE](#) | [CONTACT US](#) | [HELP](#) | [HOME](#) | [LOGOUT](#) |

Location: [WTRS](#) / [WT DATA](#) / [Input WT Record](#)WTRS-WT-008

Water Taking Data submitted successfully.

**Confirmation:**

Thank you for submitting your water taking data online.

Permit Number: 6634-B23PER  
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.  
Received on: Jan 24, 2024 12:06 PM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

[Print Confirmation](#)[Return to Main Page](#)

CITY OF KAWARTHA LAKES | 2024/01/24  
version: v4.5.0.21 (build#: 22)  
Last modified: 2018/09/18



This site maintained by  
the Government of Ontario

©2024 [Queen's Printer for Ontario](#)