

Sonya Drinking Water System

Waterworks # 2600056516
System Category – Small Municipal Residential

Annual Water Report

Reporting Period of January 1st – December 31st, 2023

Issued: February 14, 2024

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	1
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
Total Monthly Flows (m ³ /d)-Well #1	3
Monthly Rated Flows (L/s)-Well #1	3
Total Monthly Flows (m ³ /d)-Well #3	4
Monthly Rated Flows (L/s)-Well #3	4
Treated Water Flows	5
Monthly Rated Flows	5
Annual Total Flow Comparison.....	5
Regulatory Sample Results Summary	6
Microbiological Testing	6
Operational Testing	6
Inorganic Parameters	6
Schedule 15 Sampling.....	7
Organic Parameters.....	8
Additional Legislated Samples	9
Major Maintenance Summary	9
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 by appointment and on the [City's website](#). 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: 260006516

Drinking Water System Name: Sonya 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

	# Events	Date	Details
Drinking Water			
MECP Inspections	1	November 16, 2023	Announced - Focused Drinking Water Inspection - Final Inspection Rating – 100%
AWQI's	0		
Number of Non-Compliances	0		
Number of Boil Water Advisories	0		

System Process Description

Raw Source

The water supply for the Sonya 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:

- Two (2) cartridge filtration systems,
- Primary disinfection from the sodium hypochlorite system,
- Secondary disinfection from the sodium hypochlorite system,
- Hydropneumatic tanks,
- Clearwell,

- High lift pump system,
- Sodium silicate injection system for iron removal,
- Stand-by diesel generator on-site.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	LAVO
Sodium Silicate	Iron Removal	Brenntag

Summary of Non-Compliance

Adverse Water Quality Incidents

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

Non-Compliance

There were no non-compliances reported during the reporting period.

Non-Compliance Identified in a Ministry Inspection:

There were no non-compliances identified in a Ministry Inspection during this period.

Flows

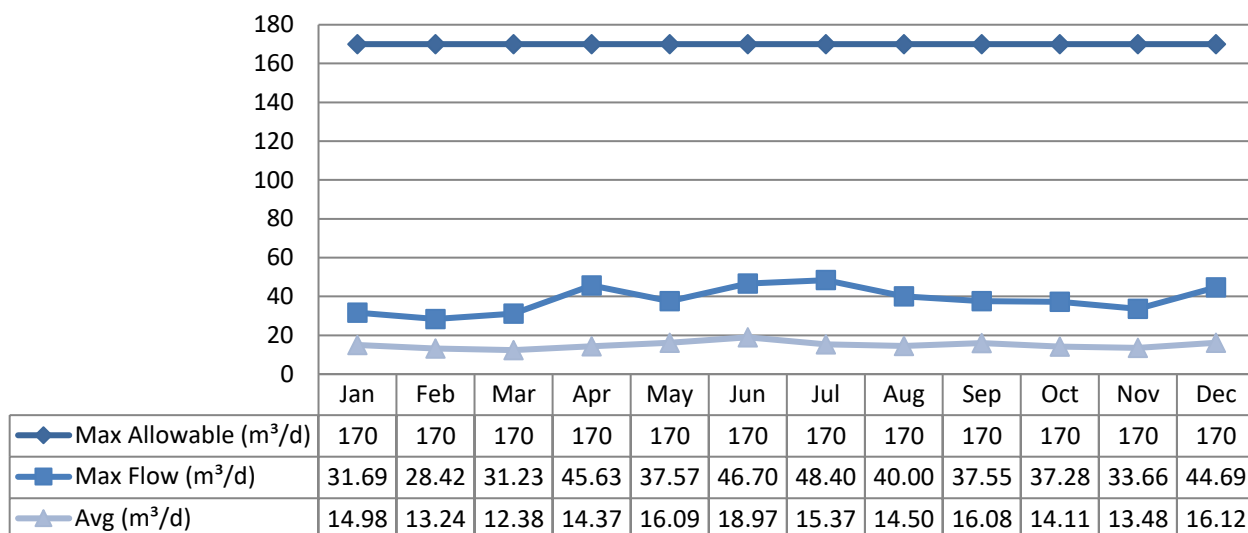
The Sonya Drinking Water System is operating on average under half the rated capacity.

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 #1246-AWTJXZ. The confirmation of the data that was submitted are attached in Appendix A.

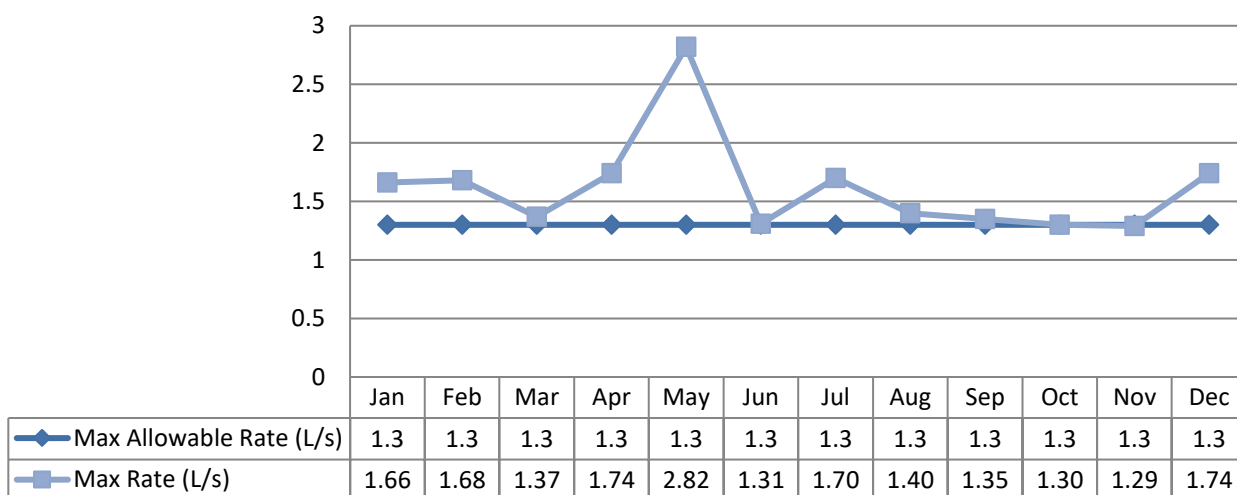
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #1



Monthly Rated Flows (L/s)

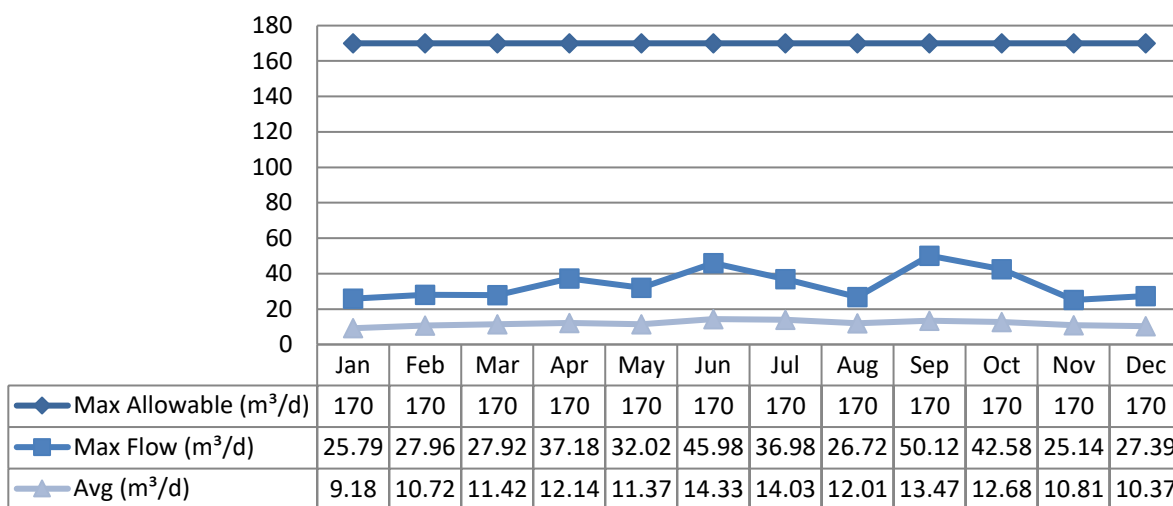
Max allowable rate – PTTW – Well #1



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s) but these exceedances were short in duration. Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. The significant spike in May was due to schedule flow meter calibration. All spikes are reviewed for compliance with O. Reg. 170/03.

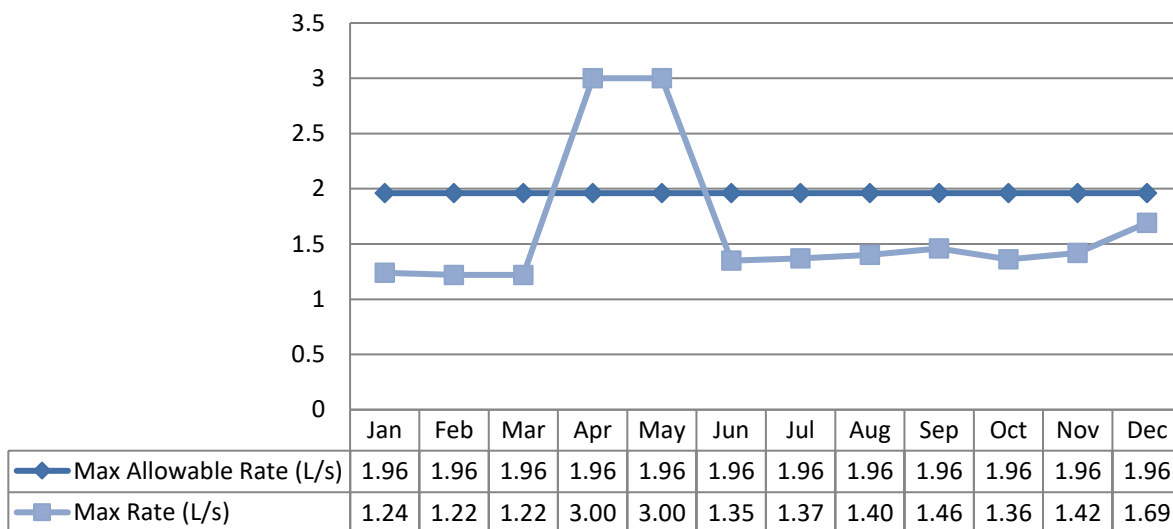
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #3



Monthly Rated Flows (L/s)

Max allowable rate – PTTW – Well #3



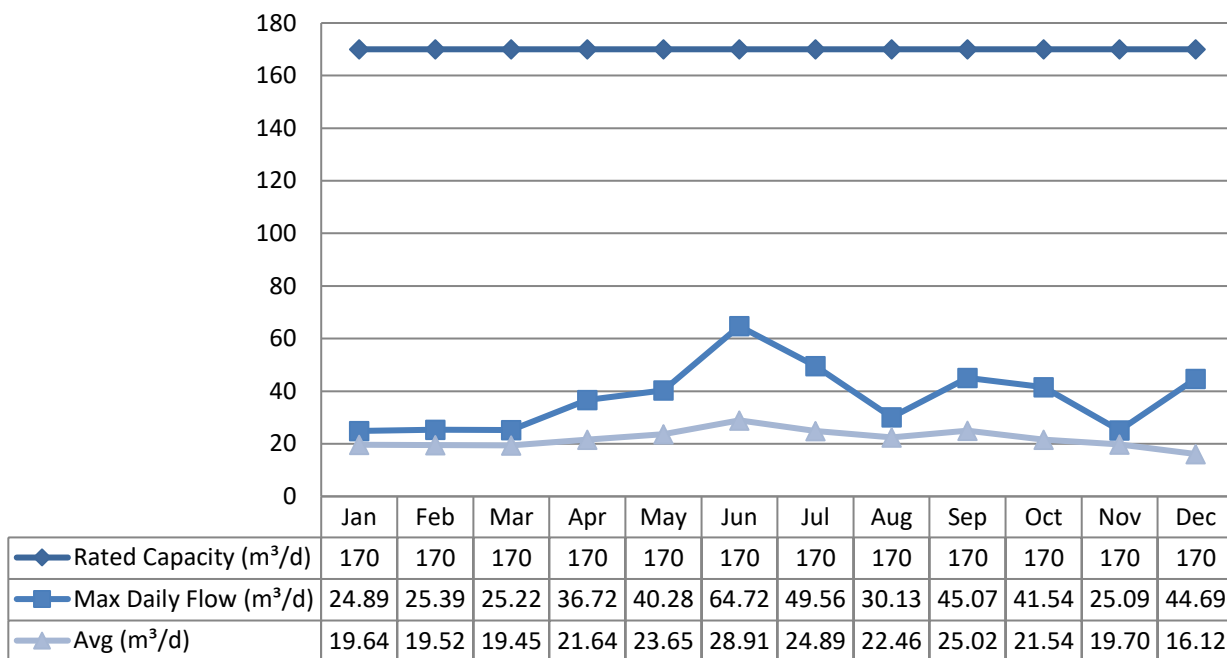
Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s) but these exceedances were short in duration. Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. The significant spike in May was due to scheduled Flow Meter calibration. All spikes are reviewed for compliance with O. Reg.170/03.

Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence 141-107.

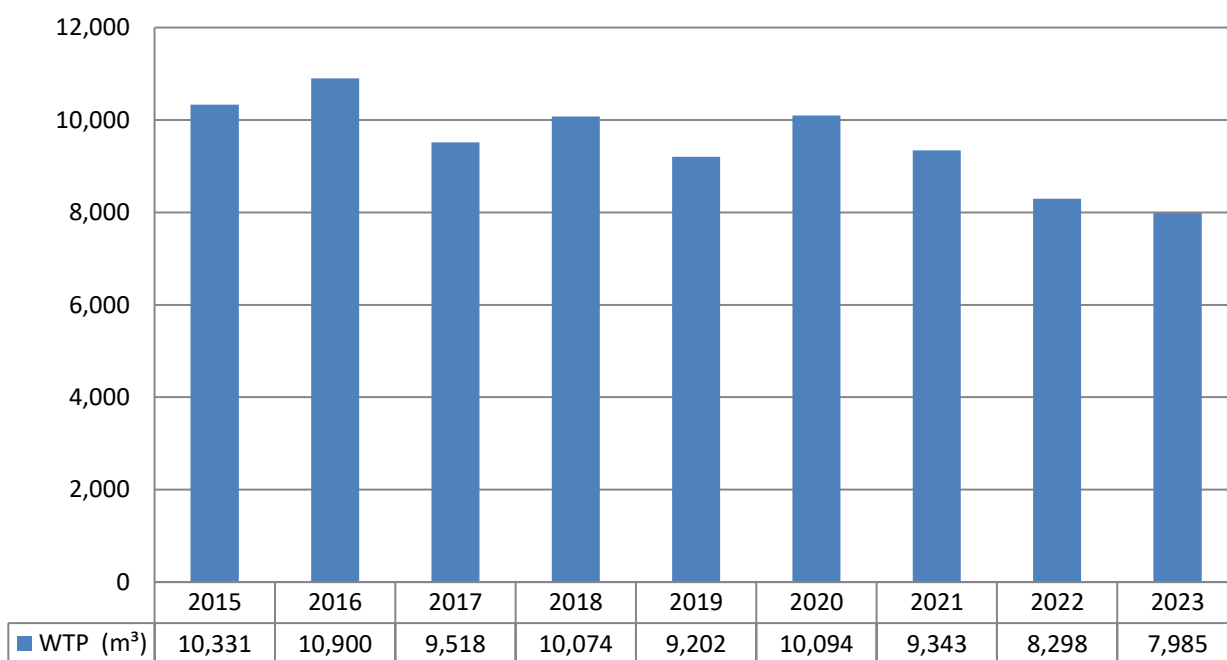
Monthly Rated Flows

Rated Capacity – MDWL



Annual Total Flow Comparison

Total Annual m³



Regulatory Sample Results Summary

Microbiological Testing

	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	52	0	<20	0	<20	N/A	N/A
Raw Well 3	52	0	0	0	<20	N/A	N/A
Treated	51	0	0	0	0	N/A	N/A
Distribution	51	0	0	0	0	0	11

Operational Testing

Parameter	Number of Samples Collected	Range of Results Minimum	Range of Results Maximum
Turbidity Well 1 (NTU)	12	0.38	2.80
Turbidity Well 3 (NTU)	12	0.26	1.54
Chlorine	8760	0	2.21
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

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.

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

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances MAC	Exceedances ½ MAC
Treated Water					
Antimony: Sb (ug/L) - TW	2020 08 04	0.1	6.0	No	No
Arsenic: As (ug/L) - TW	2020 08 04	0.4	10.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances MAC	Exceedances ½ MAC
Barium: Ba (ug/L) - TW	2020 08 04	159.0	1000.0	No	No
Boron: B (ug/L) - TW	2020 08 04	20.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2020 08 04	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2020 08 04	0.12	50.0	No	No
Mercury: Hg (ug/L) - TW	2020 08 04	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2020 08 04	<MDL 0.04	50.0	No	No
Uranium: U (ug/L) - TW	2020 08 04	0.55	20.0	No	No
Additional Organics					
Fluoride (mg/L) - TW	2023 01 04	0.08	1.5	No	No
Nitrite (mg/L) - TW	2023 01 03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2023 04 03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2023 07 04	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2023 10 02	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2023 01 04	0.223	10.0	No	No
Nitrate (mg/L) - TW	2023 04 03	0.094	10.0	No	No
Nitrate (mg/L) - TW	2023 07 04	0.092	10.0	No	No
Nitrate (mg/L) - TW	2023 10 02	0.094	10.0	No	No
Sodium: Na (mg/L) - TW	2023 12 11	12.6	20*	No	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 (µg/L)	Number of Exceedances
Alkalinity (mg/L)	1	2	256	256	N/A	N/A
pH	1	2	7.49	7.67	N/A	N/A
Lead (µg/l)	1	2	0.07	0.15	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)	2020/08/04	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L)	2020/08/04	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L)	2020/08/04	<MDL 0.05	20.0	No	No
Benzene (ug/L)	2020/08/04	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L)	2020/08/04	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L)	2020/08/04	<MDL 0.33	5.0	No	No
Carbaryl (ug/L)	2020/08/04	<MDL 0.05	90.0	No	No
Carbofuran (ug/L)	2020/08/04	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L)	2020/08/04	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L)	2020/08/04	<MDL 0.02	90.0	No	No
Diazinon (ug/L)	2020/08/04	<MDL 0.02	20.0	No	No
Dicamba (ug/L)	2020/08/04	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L)	2020/08/04	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L)	2020/08/04	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L)	2020/08/04	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L)	2020/08/04	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L)	2020/08/04	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L)	2020/08/04	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)	2020/08/04	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L)	2020/08/04	<MDL 0.4	9.0	No	No
Dimethoate (ug/L)	2020/08/04	<MDL 0.06	20.0	No	No
Diquat (ug/L)	2020/08/04	<MDL 1.0	70.0	No	No
Diuron (ug/L)	2020/08/04	<MDL 0.03	150.0	No	No
Glyphosate (ug/L)	2020/08/04	<MDL 1.0	280.0	No	No
Malathion (ug/L)	2020/08/04	<MDL 0.02	190.0	No	No
Metolachlor (ug/L)	2020/08/04	<MDL 0.01	50.0	No	No
Metribuzin (ug/L)	2020/08/04	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)	2020/08/04	<MDL 0.3	80.0	No	No
Paraquat (ug/L)	2020/08/04	<MDL 1.0	10.0	No	No
PCB (ug/L)	2020/08/04	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L)	2020/08/04	<MDL 0.15	60.0	No	No
Phorate (ug/L)	2020/08/04	<MDL 0.01	2.0	No	No
Picloram (ug/L)	2020/08/04	<MDL 1.0	190.0	No	No
Prometryne (ug/L)	2020/08/04	<MDL 0.03	1.0	No	No

Treated Water Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedance MAC	Exceedance ½ MAC
Simazine (ug/L)	2020/08/04	<MDL 0.01	10.0	No	No
Terbufos (ug/L)	2020/08/04	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L)	2020/08/04	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L)	2020/08/04	<MDL 0.2	100.0	No	No
Triallate (ug/L)	2020/08/04	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L)	2020/08/04	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L)	2020/08/04	<MDL 0.25	5.0	No	No
Trifluralin (ug/L)	2020/08/04	<MDL 0.12	100.0	No	No
Vinyl Chloride (ug/L)	2020/08/04	<MDL 0.02	45.0	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average Q1 - DW	2023/01/04	13.50	100.0	No	No
Trihalomethane: Total (ug/L) Annual Average Q2 - DW	2023/04/03	13.25	100.0	No	No
Trihalomethane: Total (ug/L) Annual Average Q3 - DW	2023/07/04	12.25	100.0	No	No
Trihalomethane: Total (ug/L) Annual Average Q4 - DW	2023/10/02	11.75	100.0	No	No
HAA Total (ug/L) Annual Average Q1 - DW	2023/01/04	5.3	80.0	No	No
HAA Total (ug/L) Annual Average Q2 - DW	2023/04/03	5.3	80.0	No	No
HAA Total (ug/L) Annual Average Q3 - DW	2023/07/04	5.3	80.0	No	No
HAA Total (ug/L) Annual Average Q4 - DW	2023/10/02	5.3	80.0	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

WO #	Description
No WO assigned	Replaced Clearwell Level Controller
61193	TSSA Generator Upgrades

WO #	Description
69277/69278	Cleaned Well #1 and Well #3

Appendix A

WTRS Submission Confirmation

The screenshot shows a web page titled "Water Taking Data submitted successfully." The page is part of the "WTRS / WT DATA / Input WT Record" section. It includes a confirmation message, a "Return to Main Page" button, and footer information about the City of Kawartha Lakes and the Ontario government.

Ontario

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: 8160-B3MP6L
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on: Jan 23, 2024 2:49 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.

[Return to Main Page](#)

CITY OF KAWARTHA LAKES | 2024/01/23
version: v4.5.0.21 (build#: 22)
Last modified: 2018/09/18

Ontario This site maintained by the Government of Ontario ©2024 Queen's Printer for Ontario