

Canadiana Shores Drinking Water System

2024 Annual Water Report

Drinking Water System Number: 220006491

Drinking Water System Operating Authorities: City of Kawartha Lakes and Ontario
Clean Water Agency

Drinking Water System Category: Large Municipal Residential

Reporting Period: January 1 – December 31, 2024



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2024 Annual Drinking Water System Summary Report

General Information

The City of Kawartha Lakes prepares a report summarizing system operation and water quality for every municipal drinking water system annually. This report has been prepared to satisfy the annual reporting requirements in O. Reg. 170/03 Section 11 and Schedule 22. The annual reports will be available to residents at the City of Kawartha Lakes Public Works Administration Office by appointment and the [City's website](#). Notification that the 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.

This system does not serve more than 10,000 residences.

Drinking Water System Number: 220006491

Drinking Water System Name: Canadiana Shores Drinking Water System

Drinking Water System Owner: City of Kawartha Lakes

Drinking Water System Category: Large Municipal Residential

Reporting Period: January 1, 2024 – December 31, 2024

Compliance Summary

Table 1. Drinking Water Compliance Summary

	Number of Events	Date	Details
Ministry (MECP) Inspections	1	August 21, 2024	Announced Focused Drinking Water Inspection – Final Inspection Rating 100%
Adverse Water Quality Incidents (AWQIs)	1	June 27, 2024	2 Total Coliform at one distribution sample location
Non-Compliances	0		
Boil Water Advisories	0		
Health and Safety	0		

Drinking Water System Description

The Canadiana Shores drinking water system is a large municipal residential drinking water system that serves the subdivision located on Washburn Island, in the City of Kawartha Lakes. The drinking water system is classified as a Class II Water Treatment and Class I Water Distribution subsystems under O. Reg. 128/04

Source Water

The water supply for the system comes from three groundwater wells: Well #2, Well #3 and Well #4. The wells are designated as GUDI (groundwater under the direct influence of surface water).

Water Treatment Facility

The treatment system consists of two (2) dual media (anthracite/silica sand) gravity filters with an equalization tank and booster pump to a cartridge filtration system, which consists of two treatment trains. There are on-line turbidimeters on each filter effluent line to monitor filter effluent turbidity. There is a three (3) cell clearwell located underneath the treatment building. Disinfection is achieved using sodium hypochlorite in the clearwell which is monitored for free chlorine residual by a continuous online analyzer connected to the common highlift pump discharge header.

The package treatment units are equipped with backwash equipment and a backwash waste storage/decant tank system.

A diesel generator is onsite to provide standby power to the water treatment facility in the event of a power failure.

Distribution System

The distribution system has approximately seven (7) kilometers of watermains and is not rated for fire protection. The watermains in the Canadiana Shores Distribution System are all PVC. There is no storage, chlorine boosting, secondary disinfection or pressure boosting capabilities within the control of the distribution system.

Table 2. Treatment Chemicals Used

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Jutzi Water Technologies

Summary of Non-Compliance

Adverse Water Quality Incidents

Table 3. Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
2024 06 27	165365	Distribution	Total Coliforms	One distribution sample adverse for 2 Total Coliforms	O. Reg. 169/03	Flush and resample. Resample returned with clear results.

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.

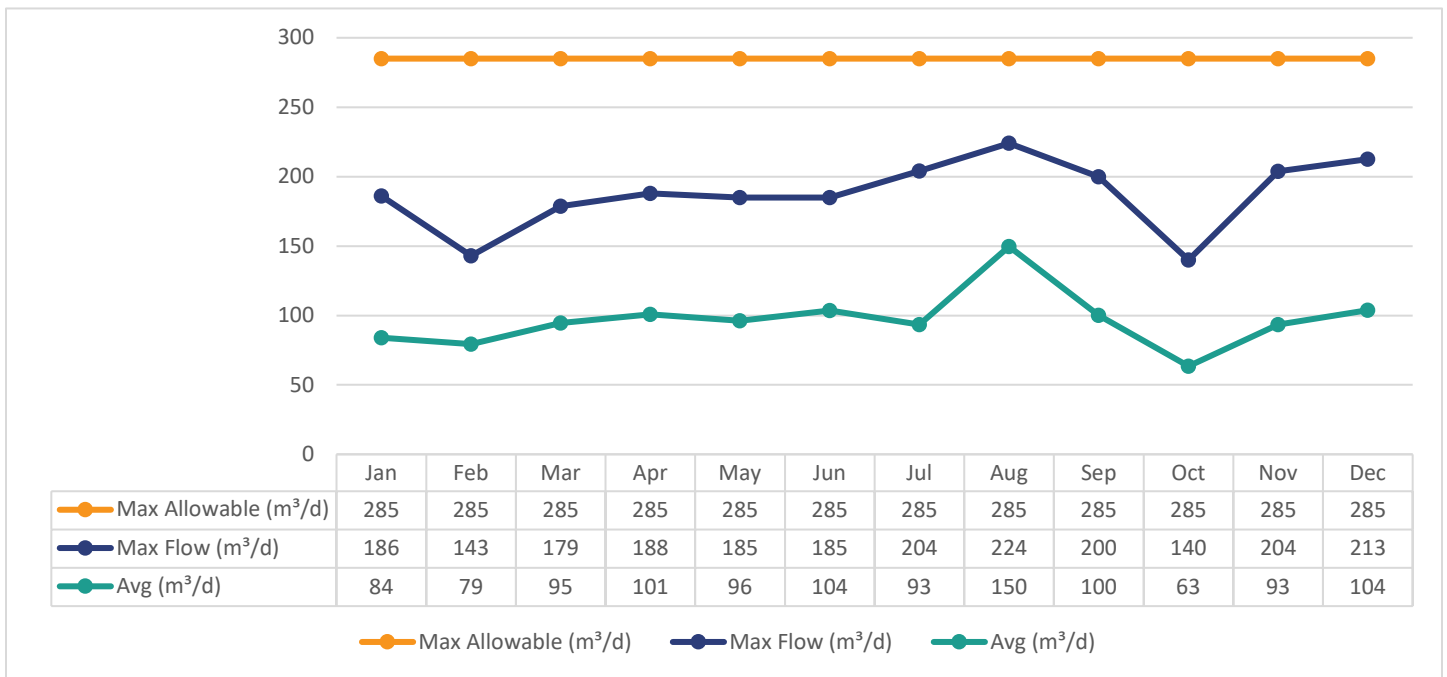
Flows

The Canadiana Shores Drinking Water System is operating on average under half the rated capacity. The rated capacity of the system (treated water flows) is 984 m³/day.

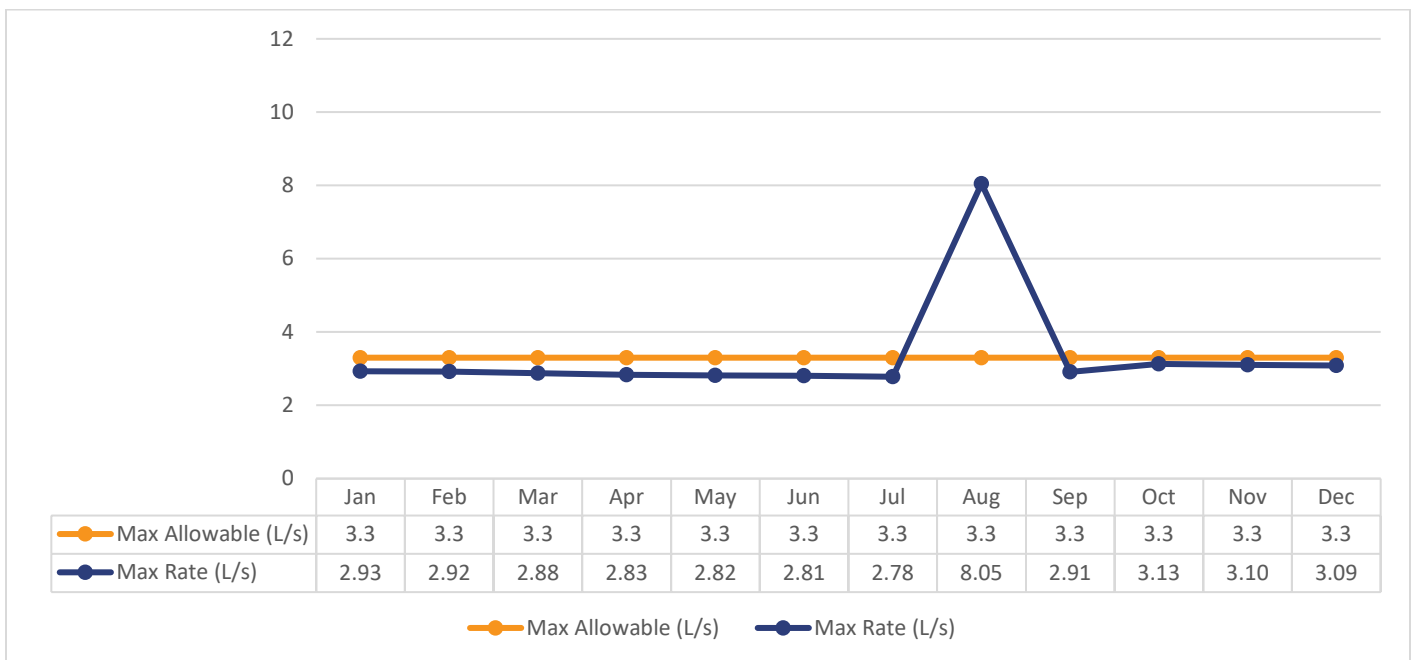
Raw Water Flows

The raw water flows are regulated under the Permit to Take Water. Raw flow data for 2024 was submitted to the Ministry of Environment, Conservation and Parks (MECP) electronically under permit #1311-BMZH78. The confirmation of the data that was submitted is attached 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.

Graph 1. Total Monthly Flows (m³/d) – Well #2 (Max Allowable PTTW)

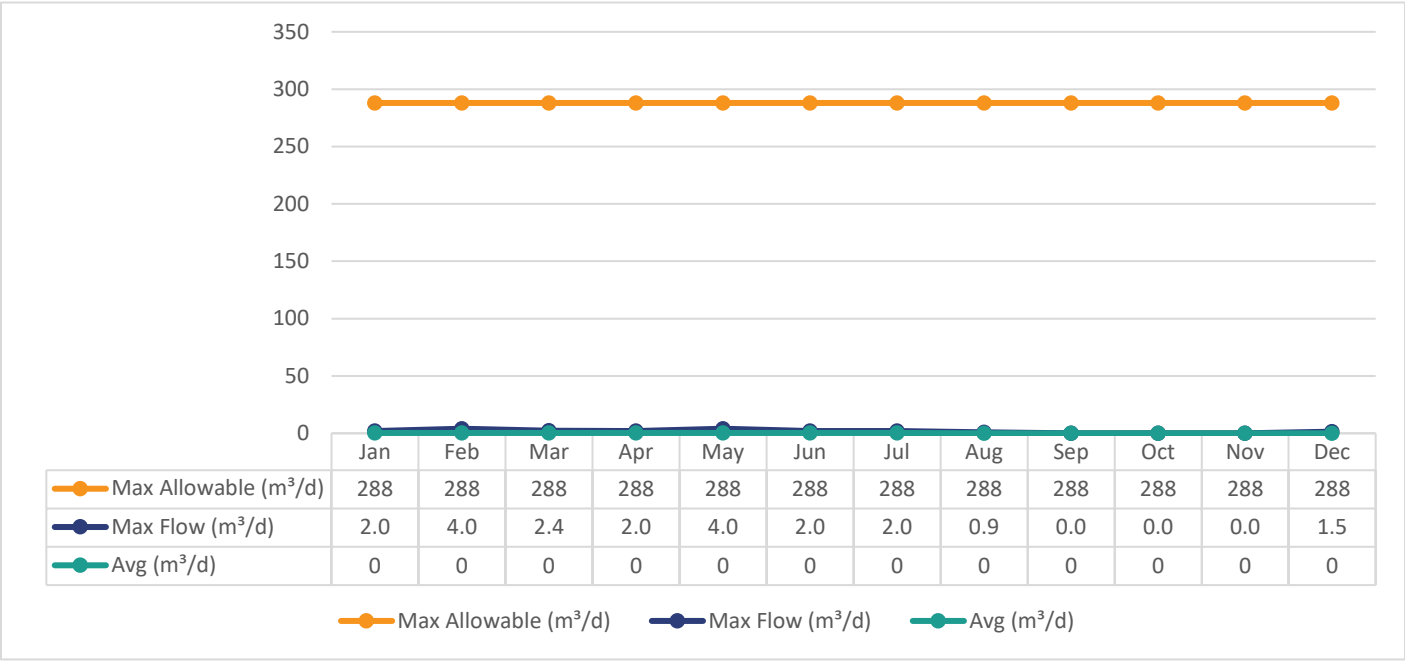


Graph 2. Monthly Rated Flows (L/s) – Well #2 (Max Allowable Rate PTTW)



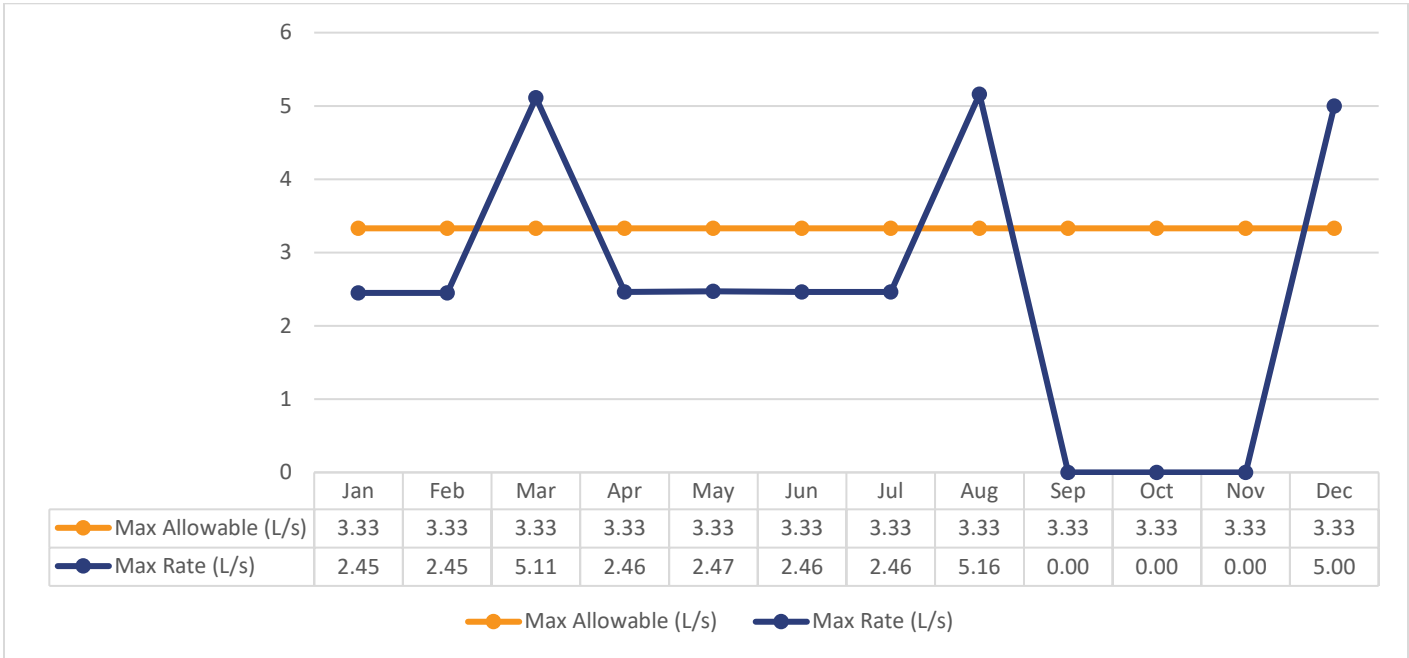
Note: Certain operational circumstances could cause results to be temporarily outside of the allowable rates. In August 2024, the allowable rate was momentarily surpassed as a result of a power outage and did not indicate a true exceedance. All spikes are reviewed for compliance with O. Reg. 170/03, a true exceedance would be documented within this report.

Graph 3. Total Monthly Flows (m³/d) – Well #3 (Max Allowable PTTW)



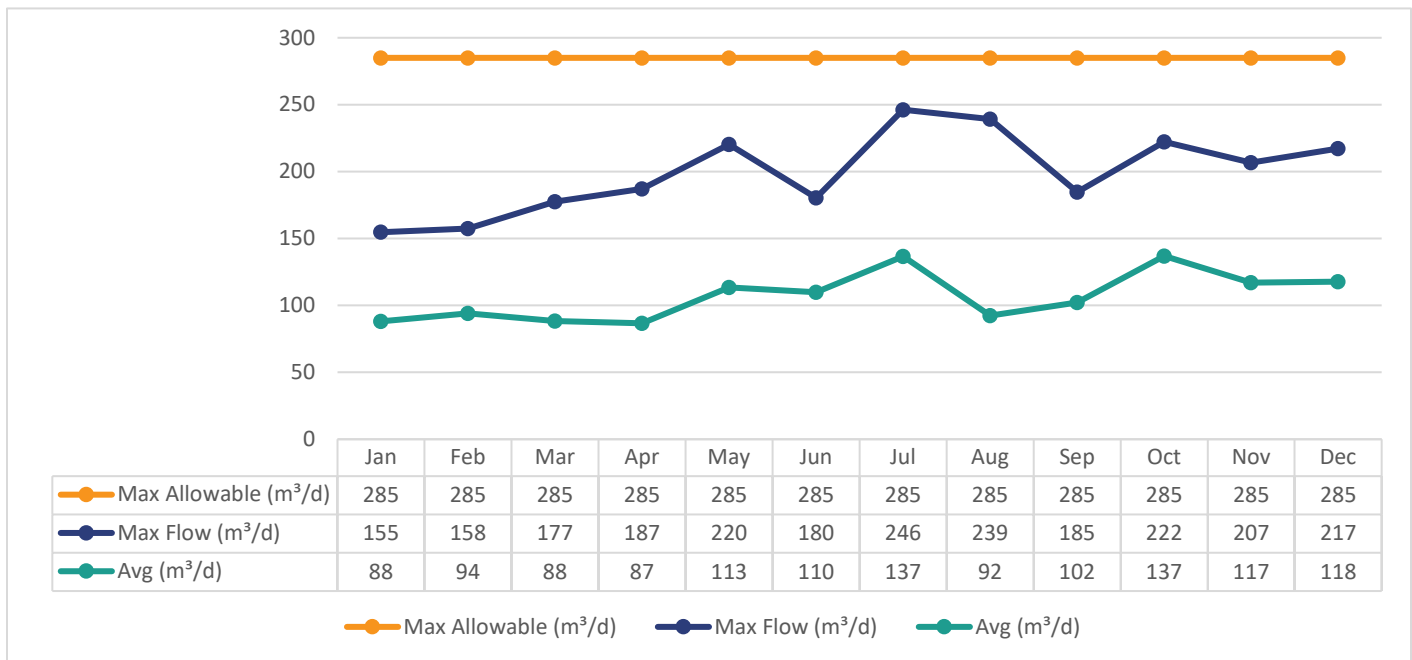
Note: Well #3 was offline for the reporting period. Replacement recommendation to be provided for 2026 budget request.

Graph 4. Monthly Rated Flows (L/s) – Well #3 (Max Allowable Rate

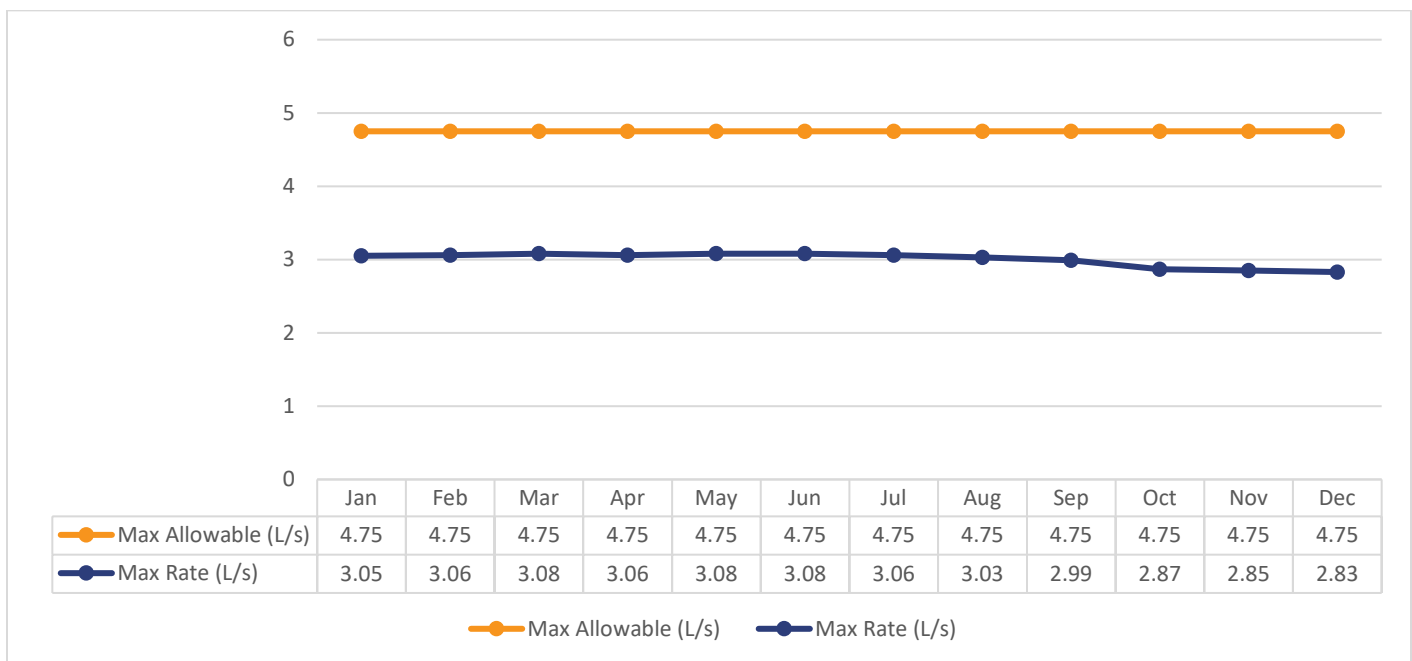


Note: Certain operational circumstances could cause results to be temporarily outside of the allowable rates. In March 2024, the allowable rate was momentarily surpassed as a result of generator transfer and did not indicate a true exceedance. In August 2024, the allowable rate was momentarily surpassed but was then determined to be a false reading and did not indicate a true exceedance. The flow meter was then removed from service and determined to be broken. In December 2024, the flow meter was replaced causing the allowable rate to be momentarily surpassed and did not indicate a true exceedance. A true exceedance would be documented in this report.

Graph 5. Total Monthly Flows (m³/d) – Well #4 (Max Allowable PTTW)



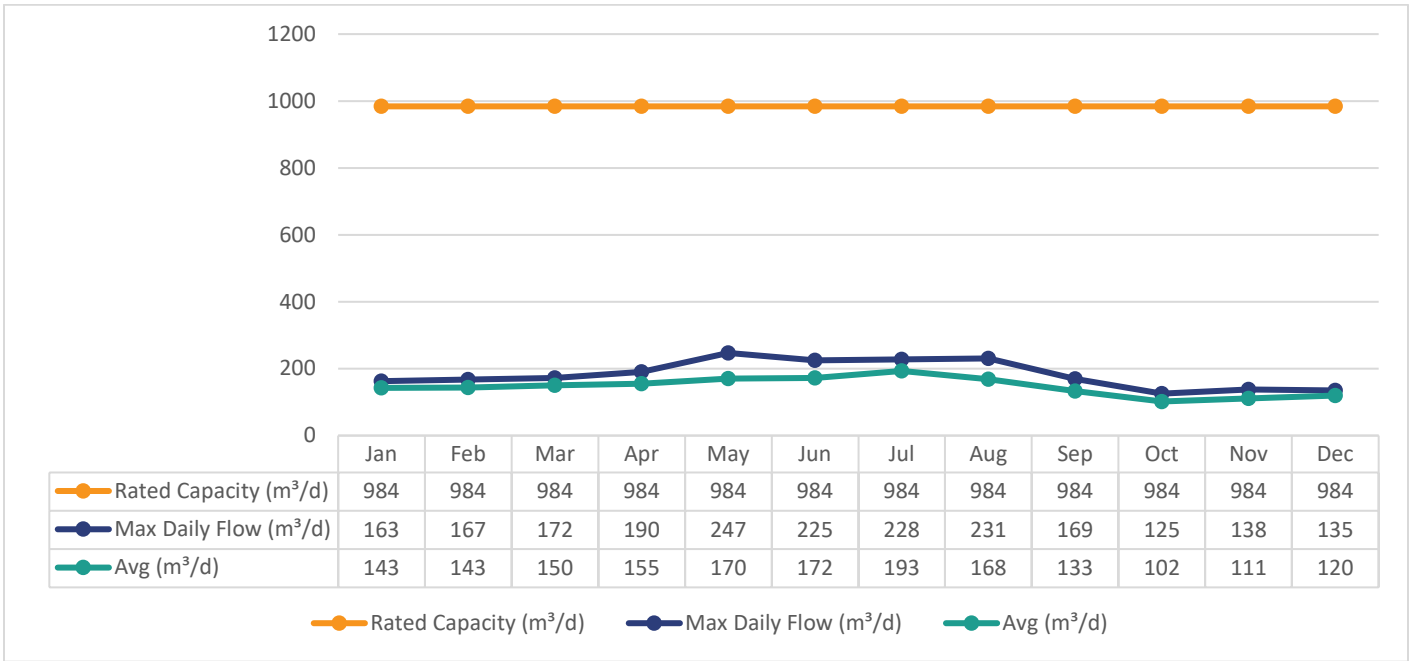
Graph 6. Monthly Rated Flows (L/s) – Well #4 (Max Allowable Rate)



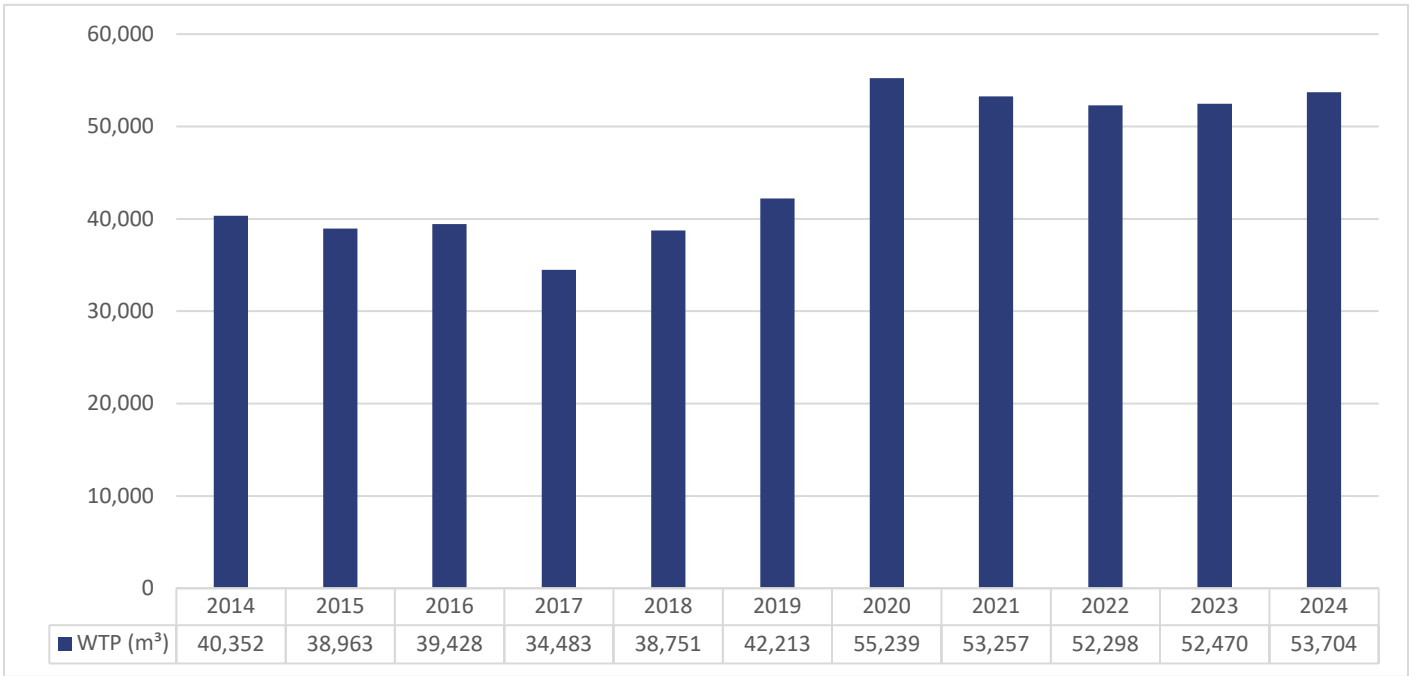
Treated Water Flows

The Treated Water flows are regulated under the Municipal Drinking Water Licence 141-112.

Graph 7. Monthly Rated Flows (m³/d) – Rated Capacity - MDWL



Graph 8. Annual Total Flow Comparison (m³)



Regulatory Sample Results Summary

Microbiological Testing

Table 4. Microbiological Test Results

	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 2	55	0	2	0	2	N/A	N/A
Raw Well 3	53	0	0	0	1	N/A	N/A
Raw Well 4	55	0	0	0	5	N/A	N/A
Treated	54	0	0	0	0	0	13
Distribution	156	0	0	0	0	0	26

OG = Overgrowth

HPC = Heterotrophic Plate Count

Operational Testing

Table 5. Operational Test Results

Parameter	Number of Samples Collected	Range of Results Minimum	Range of Results Maximum
Turbidity Well 2 (NTU)	12	0.15	0.39
Turbidity Well 3 (NTU)	12	0.12	0.32
Turbidity Well 4 (NTU)	12	0.12	0.62
Turbidity – Filter 1 (NTU)	8760	0.00	0.29
Turbidity – Filter 2 (NTU)	8760	0.00	0.98
Chlorine	8760	0.32	3.10
Fluoride (If the DWS provides fluoridation)			

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

Note: For continuous monitors 8760 is used as the number of samples. Spikes recorded by online 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 Nitrate are tested quarterly and the metals are

tested annually as required under O. Reg. 170/03. In the event any of the parameters listed in Schedule 23 or 24 of O. Reg. 170/03 exceed half of the maximum allowable concentration the parameter is required to be samples quarterly. Based on the latest test results no additional testing is required.

Table 6. Inorganic Parameters Test Results

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Treated Water					
Antimony	2024 01 02	<MDL 0.6	µg/L	6.0	No
Arsenic	2024 01 02	<MDL 0.2	µg/L	10.0	No
Barium	2024 01 02	115.0	µg/L	1000.0	No
Boron	2024 01 02	10.0	µg/L	5000.0	No
Cadmium	2024 01 02	<MDL 0.003	µg/L	5.0	No
Chromium	2024 01 02	0.14	µg/L	50.0	No
Mercury	2024 01 02	<MDL 0.01	µg/L	1.0	No
Selenium	2024 01 02	0.1	µg/L	50.0	No
Uranium	2024 01 02	5.75	µg/L	20.0	No
Additional Organics					
Fluoride	2023 01 03	0.08	mg/L	1.5	No
Nitrite	2024 01 02	<MDL 0.003	mg/L	1.0	No
Nitrite	2024 04 02	<MDL 0.003	mg/L	1.0	No
Nitrite	2024 07 02	<MDL 0.003	mg/L	1.0	No
Nitrite	2024 10 07	<MDL 0.003	mg/L	1.0	No
Nitrate	2024 01 02	1	mg/L	10.0	No
Nitrate	2024 04 02	1.13	mg/L	10.0	No
Nitrate	2024 07 02	0.744	mg/L	10.0	No
Nitrate	2024 10 07	0.597	mg/L	10.0	No
Sodium	2023 01 03	16.7	mg/L	20*	No

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

MDL = Method Detection Limit

*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. Sodium results exceeding 20 mg/L are to be reported to the Medical Officer of Health as per Schedule 16-3 (8) of O. Reg. 170/03.

Schedule 15 Sampling (Lead)

The Schedule 15 sampling is required under O. Reg. 170/03. This system is under reduced sampling. Only distribution samples were collected, and no plumbing samples were collected.

Table 7. Schedule 15 Test Results (Lead)

	Number of Sampling Points	Number of Samples	Range of Results Minimum	Range of Results Maximum	MAC (µg/L)	Number of Exceedances
Alkalinity (mg/L)	2	4	286	291	N/A	N/A
pH	2	4	7.54	7.63	N/A	N/A
Lead (µg/L)	N/A	N/A	N/A	N/A	10.0	N/A

Organic Parameters

These parameters are tested as a requirement under O. Reg. 170/03. In the event any of the parameters listed in Schedule 23 or 24 of O. Reg. 170/03 exceed half of the maximum allowable concentration the parameter is required to be samples quarterly. Based on the latest test results no additional testing is required.

Table 8. Organic Parameters Test Results

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Treated Water					
Alachlor	2024 01 02	<MDL 0.02	µg/L	5.0	No
Atrazine + N-dealkylated metabolites	2024 01 02	<MDL 0.01	µg/L	5.0	No
Azinphos-methyl	2024 01 02	<MDL 0.05	µg/L	20.0	No
Benzene	2024 01 02	<MDL 0.32	µg/L	1.0	No
Benzo(a)pyrene	2024 01 02	<MDL 0.004	µg/L	0.01	No
Bromoxynil	2024 01 02	<MDL 0.33	µg/L	5.0	No
Carbaryl	2024 01 02	<MDL 0.05	µg/L	90.0	No
Carbofuran	2024 01 02	<MDL 0.01	µg/L	90.0	No
Carbon Tetrachloride	2024 01 02	<MDL 0.17	µg/L	2.0	No

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Chlorpyrifos	2024 01 02	<MDL 0.02	µg/L	90.0	No
Diazinon	2024 01 02	<MDL 0.02	µg/L	20.0	No
Dicamba	2024 01 02	<MDL 0.2	µg/L	120.0	No
1,2-Dichlorobenzene	2024 01 02	<MDL 0.41	µg/L	200.0	No
1,4-Dichlorobenzene	2024 01 02	<MDL 0.36	µg/L	5.0	No
1,2-Dichloroethane	2024 01 02	<MDL 0.35	µg/L	5.0	No
1,1-Dichloroethylene	2024 01 02	<MDL 0.33	µg/L	14.0	No
Dichloromethane (Methylene Chloride)	2024 01 02	<MDL 0.35	µg/L	50.0	No
2,4-Dichlorophenol	2024 01 02	<MDL 0.15	µg/L	900.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2024 01 02	<MDL 0.19	µg/L	100.0	No
Diclofop-methyl	2024 01 02	<MDL 0.4	µg/L	9.0	No
Dimethoate	2024 01 02	<MDL 0.06	µg/L	20.0	No
Diquat	2024 01 02	<MDL 1.0	µg/L	70.0	No
Diuron	2024 01 02	<MDL 0.03	µg/L	150.0	No
Glyphosate	2024 01 02	<MDL 1.0	µg/L	280.0	No
Malathion	2024 01 02	<MDL 0.02	µg/L	190.0	No
2-Methyl- 4chlorophenoxyacetic Acid (MCPA)	2024 01 02	<MDL 0.12	µg/L	100.0	No
Metolachlor	2024 01 02	<MDL 0.01	µg/L	50.0	No
Metribuzin	2024 01 02	<MDL 0.02	µg/L	80.0	No
Monochlorobenzene (Chlorobenzene)	2024 01 02	<MDL 0.3	µg/L	80.0	No
Paraquat	2024 01 02	<MDL 1.0	µg/L	10.0	No
PCB	2024 01 02	<MDL 0.04	µg/L	3.0	No
Pentachlorophenol	2024 01 02	<MDL 0.15	µg/L	60.0	No
Phorate	2024 01 02	<MDL 0.01	µg/L	2.0	No
Picloram	2024 01 02	<MDL 1.0	µg/L	190.0	No
Prometryne	2024 01 02	<MDL 0.03	µg/L	1.0	No
Simazine	2024 01 02	<MDL 0.01	µg/L	10.0	No
Terbufos	2024 01 02	<MDL 0.01	µg/L	1.0	No
Tetrachloroethylene	2024 01 02	<MDL 0.35	µg/L	10.0	No
2,3,4,6- Tetrachlorophenol	2024 01 02	<MDL 0.2	µg/L	100.0	No
Triallate	2024 01 02	<MDL 0.01	µg/L	230.0	No
Trichloroethylene	2024 01 02	<MDL 0.44	µg/L	5.0	No
2,4,6-Trichlorophenol	2024 01 02	<MDL0.25	µg/L	5.0	No
Trifluralin	2024 01 02	<MDL 0.02	µg/L	45.0	No
Vinyl Chloride	2024 01 02	<MDL 0.17	µg/L	1.0	No
Distribution Water					

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Trihalomethane Total Annual Average Q1	2024 01 02	10.08	µg/L	100.0	No
Trihalomethane Total Annual Average Q2	2024 04 02	8.7	µg/L	100.0	No
Trihalomethane Total Annual Average Q3	2024 07 02	9.58	µg/L	100.0	No
Trihalomethane Total Annual Average Q4	2024 10 07	9.58	µg/L	100.0	No
HAA Total Annual Average Q1	2024 01 02	<MDL 5.3	µg/L	80.0	No
HAA Total Annual Average Q2	2024 04 02	<MDL 5.3	µg/L	80.0	No
HAA Total Annual Average Q3	2024 07 02	<MDL 5.3	µg/L	80.0	No
HAA Total Annual Average Q4	2024 10 07	<MDL 5.3	µg/L	80.0	No

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

MDL = Method Detection Limit

Additional Legislated Samples

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Table 9. Suspended Solids (Composite) Test Results

Date Legal Instrument Issued	Parameter	Date Sampled	Result	Unit of Measure
April 21, 2021	Suspended Solids (Composite)	2024 01 29	<2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 02 26	<2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 03 25	<2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 04 29	2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 05 27	2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 06 24	2	mg/L

Date Legal Instrument Issued	Parameter	Date Sampled	Result	Unit of Measure
April 21, 2021	Suspended Solids (Composite)	2024 07 29	<2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 08 26	<2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 09 23	<2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 10 28	4	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 11 25	2	mg/L
April 21, 2021	Suspended Solids (Composite)	2024 12 30	7	mg/L
Summary	Suspended Solids (Composite) 12 Month Rolling Average	2024	Average: 2.9	mg/L

Note: Suspended Solids Annual Average Concentration limit is 25 mg/L as per MDWL 141-112.

Minor Maintenance

- Drain valve at injectors installed
- Clearwell meter level miltronics replacement
- Well #3 flow meter replacement
- Raw pipe isolation valve leaking prior to chlorine injectors repaired
- Booster pump train #1 noise, troubleshoot and repair
- Highlift pump #2 fault repair
- Pressure relief post highlift pump #5 leaking
- Pressure transducer follow up
- Highlift #5 singer valve leaking repaired
- Heater propane furnace motor/belt replacement



Major Maintenance Expense (above \$10,000)

Under Section 11 of O. Reg. 170/03, a description of any major expenses incurred during this reporting period to install, repair or replace required equipment must be included in the annual report. The details of the major expenses for this drinking water system are as follows:

Nothing to report for the reporting period.

APPENDIX A

WTR 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: 1311-BMZH78
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on: Feb 12, 2025 11:37 AM

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](#)



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