Woods of Manilla Drinking Water System

2024 Annual Water Report

Drinking Water System Number: 210002218

Drinking Water System Operating Authority: City of Kawartha Lakes

Drinking Water System Category: Small Municipal Residential

Reporting Period: January 1 – December 31, 2024

Annual Drinking Water Report

City of Kawartha Lakes

Kawartha Lakes

Jump In

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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: 210002218
Drinking Water System Name: Woods of Manilla Drinking Water System
Drinking Water System Owner: City of Kawartha Lakes
Drinking Water System Category: Small 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	July 2, 2024	Announced – Focused Drinking Water Inspection – Final Inspection Rating – 100%
Adverse Water Quality Incidents (AWQIs)	0		
Non-Compliances	0		
Boil Water Advisories	0		

Drinking Water System Description

The Woods of Manilla drinking water system is a small municipal residential drinking water system that serves the Woods of Manilla subdivision in the Village of Manilla, Ontario. The drinking water system is classified as a Limited Groundwater subsystem under O. Reg. 128/04. The drinking water system consists of two water treatment facilities; however, Manilla II is the duty plant and Manilla I is considered the standby plant, but is currently offline and disconnected from the system.

Source Water

The water supply for the system comes from two groundwater wells: Well #1 which supplies water to Woods of Manilla WTP I and Well #2A is the duty production well that provides water to Woods of Manilla WTP II. The wells are designated as non-GUDI (groundwater under the direct influence).

Water Treatment Facility

The treatment system for Woods of Manilla I WTP consists of the following: primary disinfection from the sodium hypochlorite system, clearwell, highlift pumping and piping system, and monitoring equipment. The Woods of Manilla II WTP consists of the same with the addition of a hydropneumatic pressure tank.

Sodium hypochlorite provides primary disinfection. The deep in-ground clearwells provide chlorine contact time and treated water storage. A diesel generator is only available onsite at Woods of Manilla II WTP to provide standby power to the water treatment facility in the event of a power failure.

Distribution System

The distribution system has approximately 1.9 kilometres of watermains, and four flushing hydrants and two sampling taps. The watermains in the Woods of Manilla Distribution System are all PVC. There is no storage, chlorine boosting, secondary disinfection or pressure boosting capabilities within the control of the distribution system. The Woods of Manilla Distribution System is not rated for fire protection.

Table 2. Treatment Chemicals Used

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	LAVO

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.

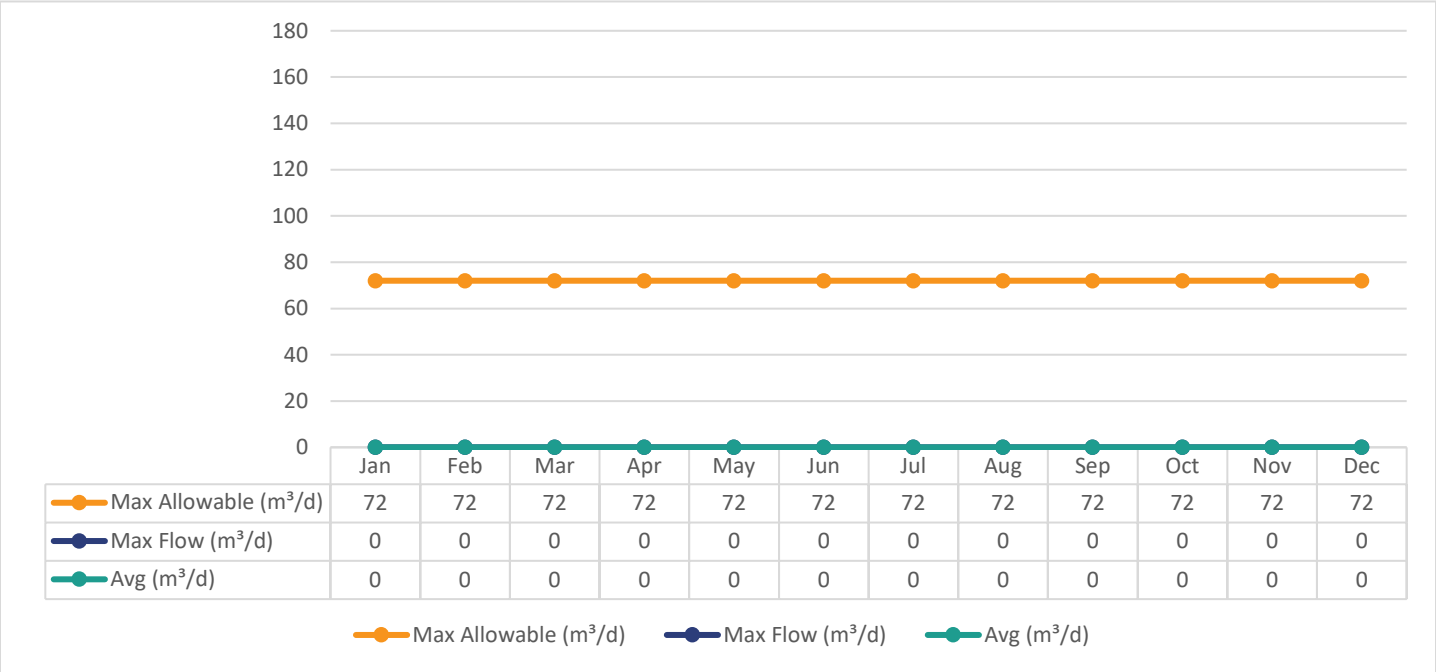
Flows

The Woods of Manilla Drinking Water System is operating on average under half the rated capacity. The rated capacity of the Woods of Manilla II system (treated water flows) is 157 m^3/day.

Raw Water Flows

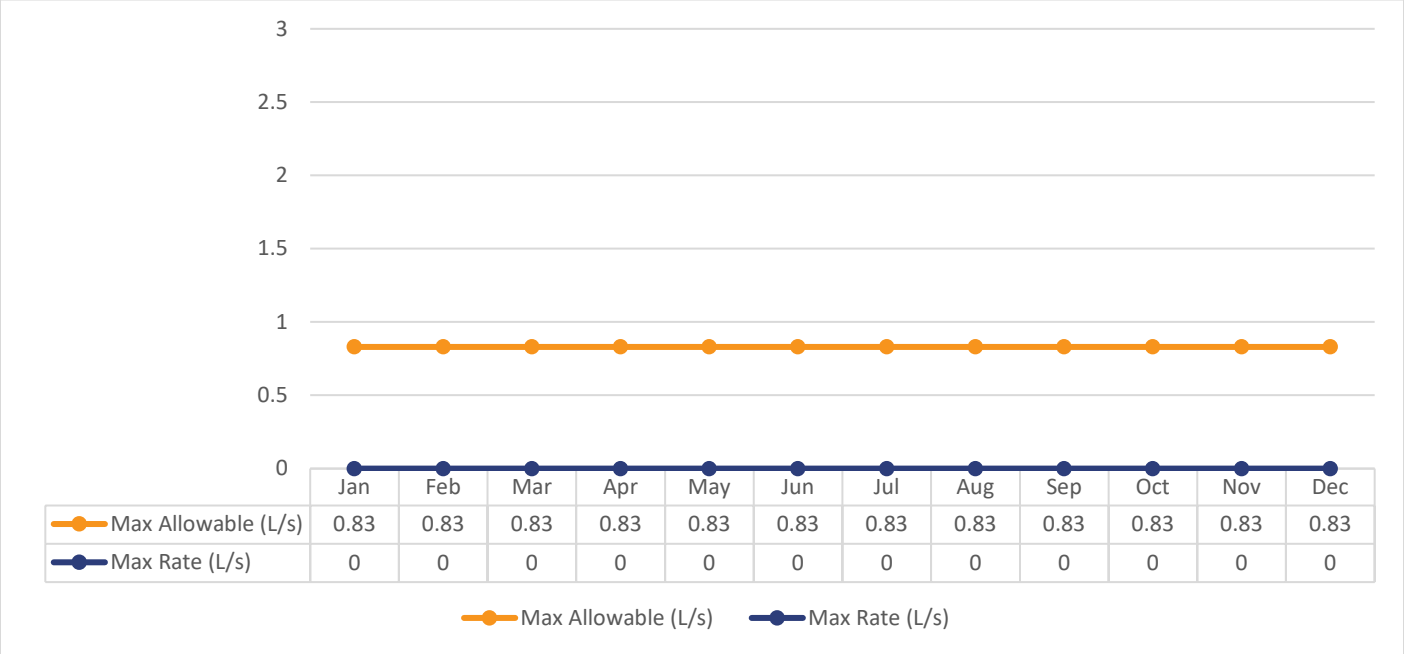
The raw water flows are regulated under the Permit to Take Water. Raw flow data for 2024 was submitted to the Ministry of Environment, Conservation and Parks (MECP) electronically under permit #2660-C7KSBJ. The confirmation of the data that was submitted is attached in Appendix A.

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



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (m³/d)	72	72	72	72	72	72	72	72	72	72	72	72
Max Flow (m³/d)	0	0	0	0	0	0	0	0	0	0	0	0
Avg (m³/d)	0	0	0	0	0	0	0	0	0	0	0	0

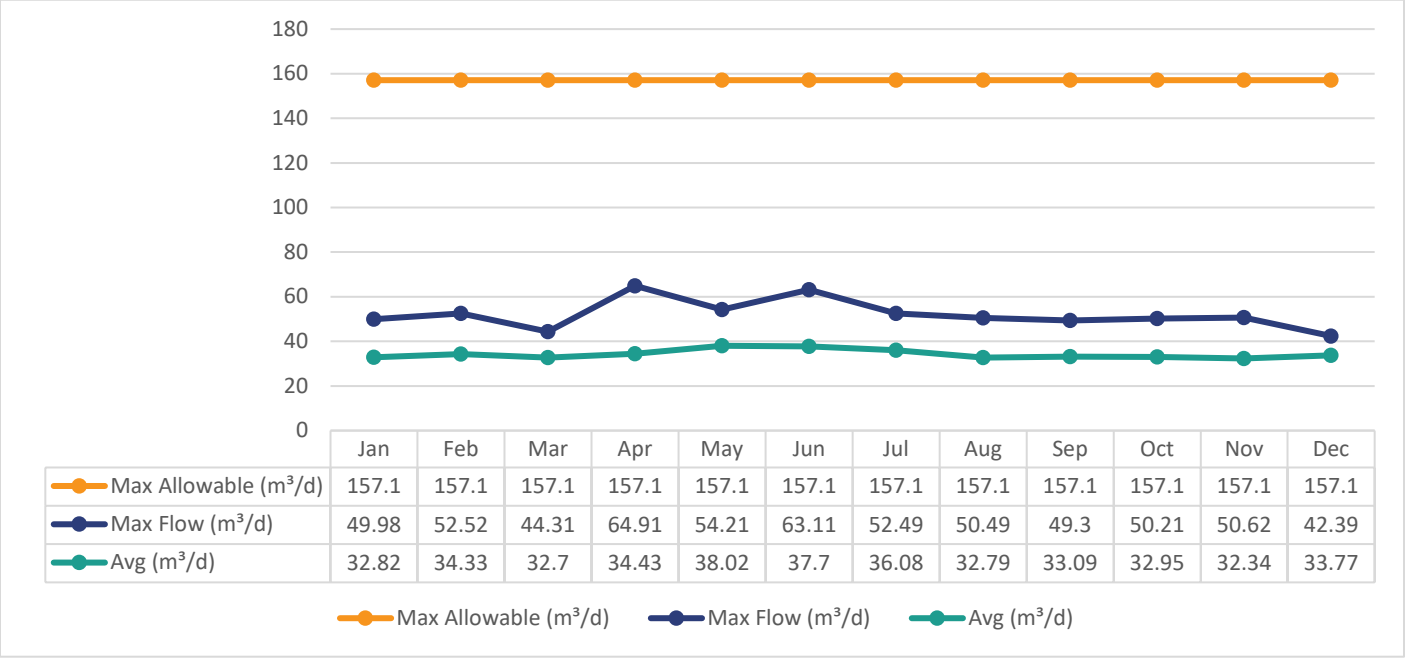
Graph 2. Monthly Rated Flows (L/s) – Well #1 (Max Allowable Rate PTTW)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (L/s)	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Max Rate (L/s)	0	0	0	0	0	0	0	0	0	0	0	0

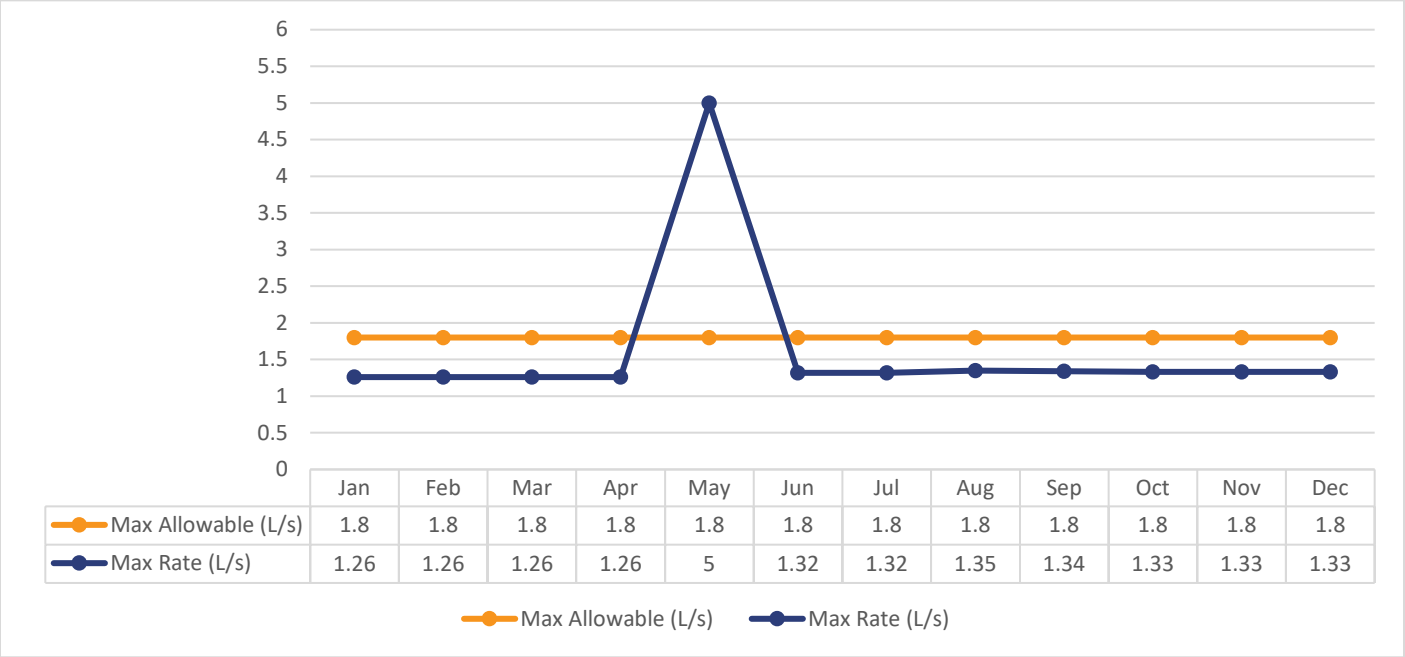
Note: Well #1 was offline during the reporting period.

Graph 3. Total Monthly Flows (m³/d) – Well #2A (Max Allowable PTTW)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (m³/d)	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1
Max Flow (m³/d)	49.98	52.52	44.31	64.91	54.21	63.11	52.49	50.49	49.3	50.21	50.62	42.39
Avg (m³/d)	32.82	34.33	32.7	34.43	38.02	37.7	36.08	32.79	33.09	32.95	32.34	33.77

Graph 4. Monthly Rated Flows (L/s) – Well #2A (Max Allowable Rate



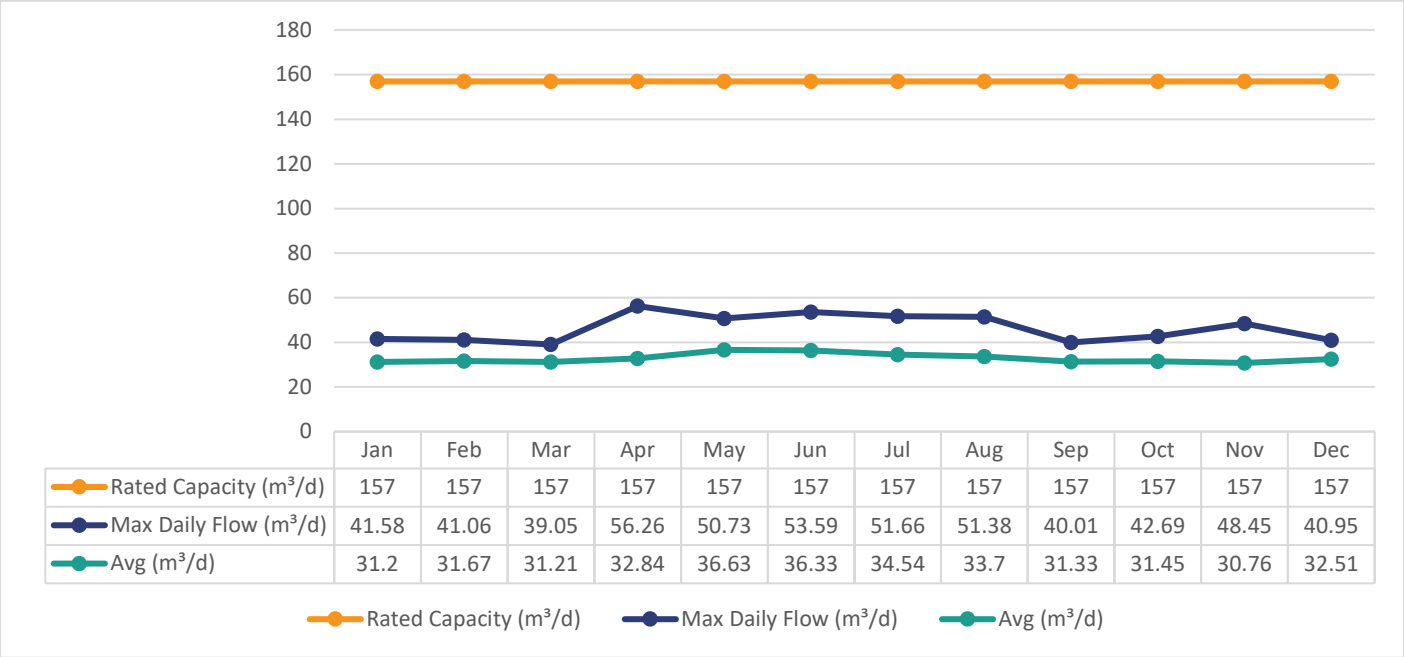
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (L/s)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Max Rate (L/s)	1.26	1.26	1.26	1.26	5	1.32	1.32	1.35	1.34	1.33	1.33	1.33

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

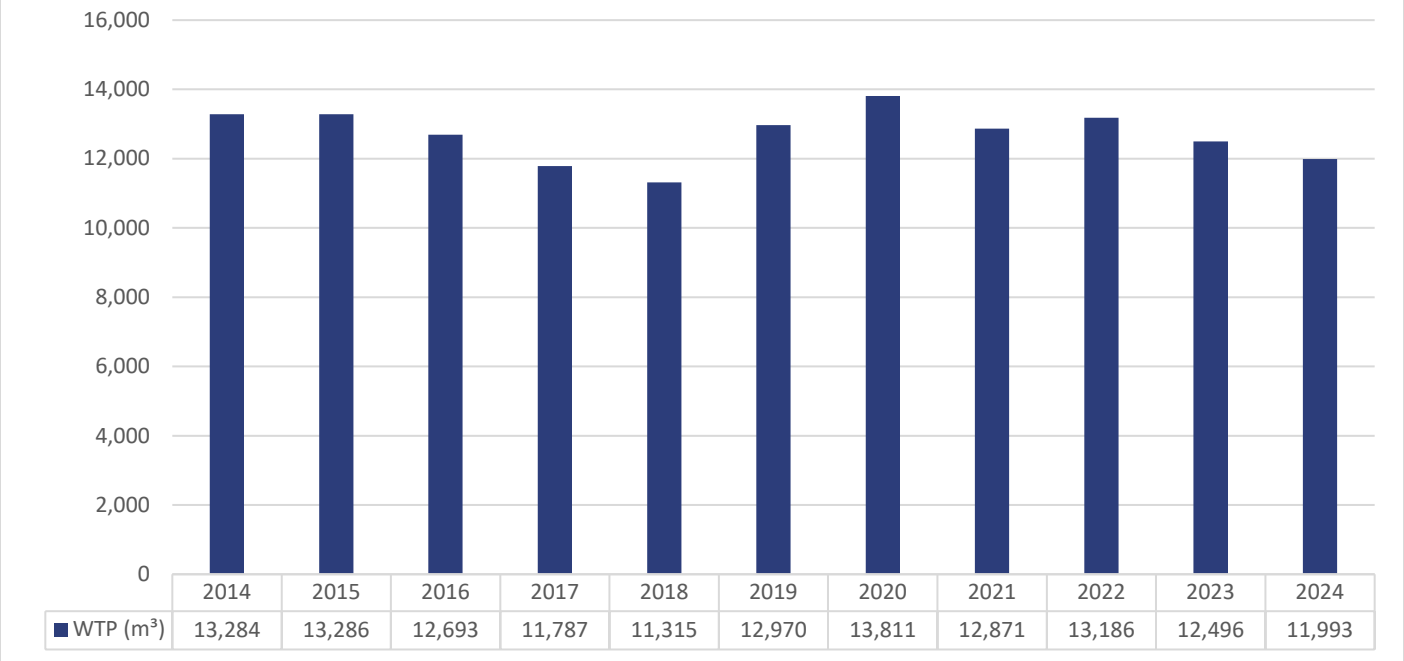
The Treated Water flows are regulated under the Municipal Drinking Water Licence 141-106. Information only provided for Woods of Manilla II during the reporting period.

Graph 5. Monthly Rated Flows (m³/d) – Rated Capacity - MDWL



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rated Capacity (m³/d)	157	157	157	157	157	157	157	157	157	157	157	157
Max Daily Flow (m³/d)	41.58	41.06	39.05	56.26	50.73	53.59	51.66	51.38	40.01	42.69	48.45	40.95
Avg (m³/d)	31.2	31.67	31.21	32.84	36.63	36.33	34.54	33.7	31.33	31.45	30.76	32.51

Graph 6. Annual Total Flow Comparison (m³)



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
WTP (m³)	13,284	13,286	12,693	11,787	11,315	12,970	13,811	12,871	13,186	12,496	11,993

Regulatory Sample Results Summary

Microbiological Testing

Table 3. 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 1	0						
Raw Well 2A	66	0	0	0	0	N/A	N/A
Treated	52	0	0	0	0	0	25
Distribution	57	0	0	0	0	0	2

HPC = Heterotrophic Plate Count

Note: Raw Well 1 was offline during the reporting period.

Operational Testing

Table 4. Operational Test Results

Parameter	Number of Samples Collected	Range of Results Minimum	Range of Results Maximum
Turbidity Well 1 (NTU)	0		
Turbidity Well 2A (NTU)	12	0	2.00
Chlorine	8760	0.54	1.97
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

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.

Note: Well 1 was offline during the reporting period.

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 every five years 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 5. Inorganic Parameters Test Results

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Treated Water					
Antimony	2020 01 06	<MDL 0.09	µg/L	6.0	No
Arsenic	2020 01 06	<MDL 0.2	µg/L	10.0	No
Barium	2020 01 06	176.0	µg/L	1000.0	No
Boron	2020 01 06	48.0	µg/L	5000.0	No
Cadmium	2020 01 06	<MDL 0.003	µg/L	5.0	No
Chromium	2020 01 06	<MDL 0.08	µg/L	50.0	No
Mercury	2020 01 06	<MDL 0.01	µg/L	1.0	No
Selenium	2020 01 06	<MDL 0.04	µg/L	50.0	No
Uranium	2020 01 06	0.022	µg/L	20.0	No
Additional Organics					
Fluoride	2020 01 06	0.26	mg/L	1.5	No
Nitrite	2024 01 08	<MDL 0.003	mg/L	1.0	No
Nitrite	2024 04 01	<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 08	0.016	mg/L	10.0	No
Nitrate	2024 04 01	0.015	mg/L	10.0	No
Nitrate	2024 07 02	0.016	mg/L	10.0	No
Nitrate	2024 10 07	0.017	mg/L	10.0	No

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Sodium	2020 01 06	17.2	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 6. 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)	1	2	167	169	N/A	N/A
pH	2	2	7.86	7.93	N/A	N/A
Lead (µg/L)	0	0	N/A	N/A	N/A	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 7. Organic Parameters Test Results

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Treated Water					
Alachlor	2020 01 06	<MDL 0.02	µg/L	5.0	No
Atrazine + N-dealkylated metabolites	2020 01 06	<MDL 0.01	µg/L	5.0	No
Azinphos-methyl	2020 01 06	<MDL 0.05	µg/L	20.0	No

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Benzene	2020 01 06	<MDL 0.32	µg/L	1.0	No
Benzo(a)pyrene	2020 01 06	<MDL 0.004	µg/L	0.01	No
Bromoxynil	2020 01 06	<MDL 0.33	µg/L	5.0	No
Carbaryl	2020 01 06	<MDL 0.05	µg/L	90.0	No
Carbofuran	2020 01 06	<MDL 0.01	µg/L	90.0	No
Carbon Tetrachloride	2020 01 06	<MDL 0.17	µg/L	2.0	No
Chlorpyrifos	2020 01 06	<MDL 0.02	µg/L	90.0	No
Diazinon	2020 01 06	<MDL 0.02	µg/L	20.0	No
Dicamba	2020 01 06	<MDL 0.2	µg/L	120.0	No
1,2-Dichlorobenzene	2020 01 06	<MDL 0.41	µg/L	200.0	No
1,4-Dichlorobenzene	2020 01 06	<MDL 0.36	µg/L	5.0	No
1,2-Dichloroethane	2020 01 06	<MDL 0.35	µg/L	5.0	No
1,1-Dichloroethylene	2020 01 06	<MDL 0.33	µg/L	14.0	No
Dichloromethane (Methylene Chloride)	2020 01 06	<MDL 0.35	µg/L	50.0	No
2,4-Dichlorophenol	2020 01 06	<MDL 0.15	µg/L	900.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2020 01 06	<MDL 0.19	µg/L	100.0	No
Diclofop-methyl	2020 01 06	<MDL 0.4	µg/L	9.0	No
Dimethoate	2020 01 06	<MDL 0.06	µg/L	20.0	No
Diquat	2020 01 06	<MDL 1.0	µg/L	70.0	No
Diuron	2020 01 06	<MDL 0.03	µg/L	150.0	No
Glyphosate	2020 01 06	<MDL 1.0	µg/L	280.0	No
Malathion	2020 01 06	<MDL 0.02	µg/L	190.0	No
2-Methyl-4chlorophenoxyacetic Acid (MCPA)	2020 01 06	<MDL 0.00012	mg/L	0.1	No
Metolachlor	2020 01 06	<MDL 0.01	µg/L	50.0	No
Metribuzin	2020 01 06	<MDL 0.02	µg/L	80.0	No
Monochlorobenzene (Chlorobenzene)	2020 01 06	<MDL 0.3	µg/L	80.0	No
Paraquat	2020 01 06	<MDL 1.0	µg/L	10.0	No
PCB	2020 01 06	<MDL 0.04	µg/L	3.0	No
Pentachlorophenol	2020 01 06	<MDL 0.15	µg/L	60.0	No
Phorate	2020 01 06	<MDL 0.01	µg/L	2.0	No
Picloram	2020 01 06	<MDL 1.0	µg/L	190.0	No
Prometryne	2020 01 06	<MDL 0.03	µg/L	1.0	No
Simazine	2020 01 06	<MDL 0.01	µg/L	10.0	No
Terbufos	2020 01 06	<MDL 0.01	µg/L	1.0	No
Tetrachloroethylene	2020 01 06	<MDL 0.35	µg/L	10.0	No
2,3,4,6-Tetrachlorophenol	2020 01 06	<MDL 0.2	µg/L	100.0	No

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Triallate	2020 01 06	<MDL 0.01	µg/L	230.0	No
Trichloroethylene	2020 01 06	<MDL 0.44	µg/L	5.0	No
2,4,6-Trichlorophenol	2020 01 06	<MDL 0.25	µg/L	5.0	No
Trifluralin	2020 01 06	<MDL 0.02	µg/L	45.0	No
Vinyl Chloride	2020 01 06	<MDL 0.17	µg/L	1.0	No
Distribution Water					
Trihalomethane Total Annual Average Q1	2024 01 08	12	µg/L	100.0	No
Trihalomethane Total Annual Average Q2	2024 04 01	11	µg/L	100.0	No
Trihalomethane Total Annual Average Q3	2024 07 02	12	µg/L	100.0	No
Trihalomethane Total Annual Average Q4	2024 10 07	17	µg/L	100.0	No
HAA Total Annual Average Q1	2024 01 08	<MDL 5.3	µg/L	80.0	No
HAA Total Annual Average Q2	2024 04 01	<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

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

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:

Installation of Standby Well at Woods of Manilla Plant II - $125,613

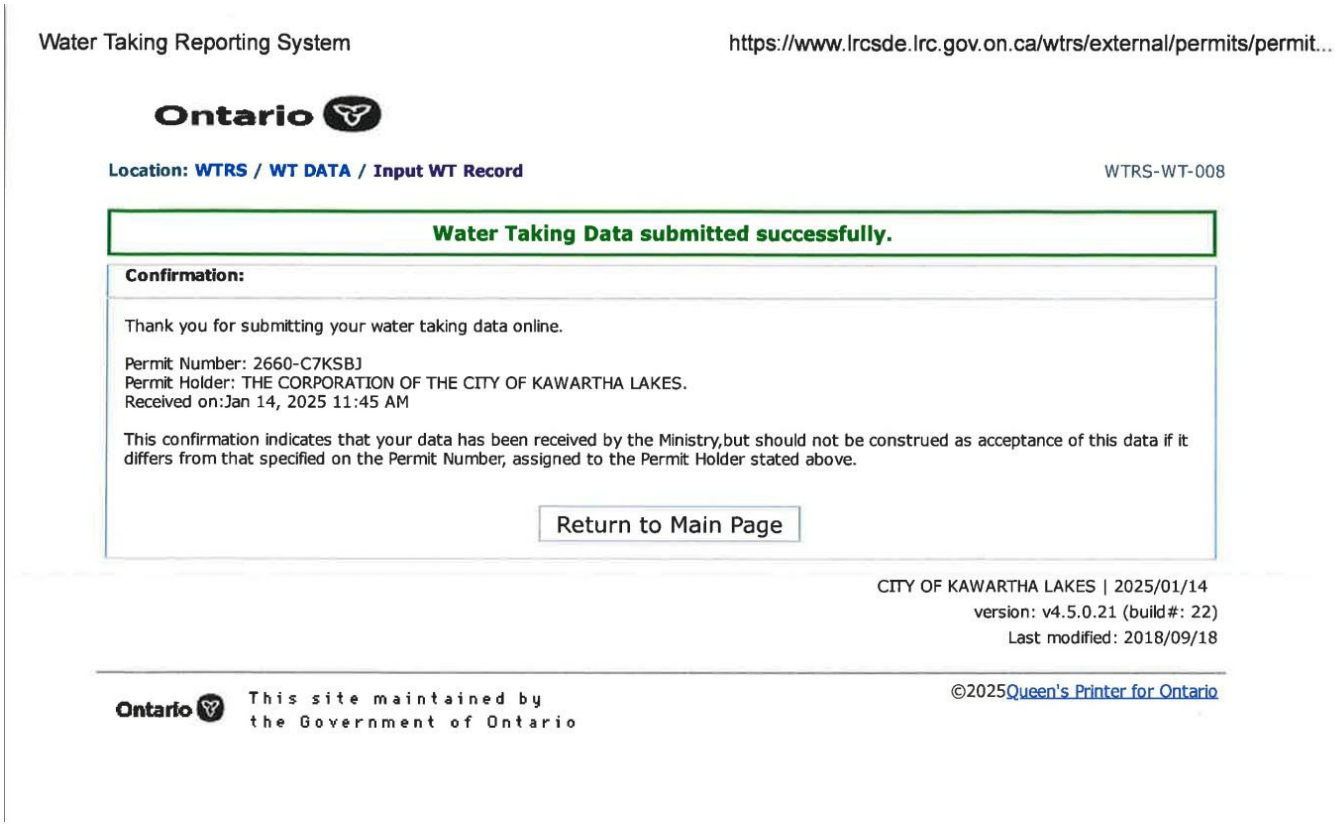
- Project includes drilling new well, source water protection studies, connections to existing water treatment facility (Woods of Manilla II WTP). Not all components of the project were completed in 2024, and will continue into 2025

Installation of New Standby Generator at Woods of Manilla Plant II - $104,733

- Project includes the moving and replacement of existing generator with new propane/natural gas generator. Final connection of generator was not completed in 2024, but will continue into 2025.

APPENDIX A

WTR Submission Confirmation



Water Taking Reporting System https://www.lrcsde.lrc.gov.on.ca/wtrs/external/permits/permit...

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: 2660-C7KSBJ
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on:Jan 14, 2025 11:45 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.

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