

Woods of Manilla Drinking Water System

Waterworks # 210002218

System Category – Small Municipal Residential

Annual Water Report

Prepared For: The City of Kawartha Lakes

Reporting Period of January 1st – December 31st 2021

Issued: February 10, 2021

Operating Authorities:



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

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Report Availability

This system does not serve more than 10,000 residences. The annual reports are available to residents free of charge at the City of Kawartha Lakes – Public Works Administration Office located at 322 Kent Street West in Lindsay, Ontario. The reports are also available online at the [Water and Wastewater page on the City of Kawartha Lakes website](#).

Compliance Report Card

Drinking Water System Number: 210002218
Drinking Water System Name: Woods of Manilla DWS
Drinking Water System Owner: City of Kawartha Lakes
Drinking Water System Category: Small Municipal Residential
Period Being Reported: January 1, 2021 - December 31, 2021

	# of Events	Date	Details
Health & Safety			
Number of Incidents	0		
Drinking Water			
MECP Inspections	1	August 12, 2021	Unannounced - Focused Drinking Water Inspection - Final Inspection Rating of 100%
AWQI's	1	May 5, 2021	Online monitoring interrupted by small power outages.
Number of Non-Compliances			
Number of Boil Water Advisories	0		

System Process Description

Raw Source

The Woods of Manilla Drinking Supply System consists of two production wells. The Woods of Manilla I Water Treatment Plant is supplied with raw groundwater from one well (Well 1) and the Woods of Manilla II Water Treatment Plant is supplied from a separate groundwater well (Well 2A).

Treatment

The treatment system consists of the following:

Woods of Manilla I

- One groundwater production well considered to be non-GUDI with a pump
- Sodium hypochlorite feed system with one metering pump
- Clearwell
- Two flow meters: raw and treated
- Chlorine analyzer
- Turbidity analyzer
- Two highlifts

Note: Woods of Manilla I was offline during the reporting year.

Woods of Manilla II

- One groundwater production well considered to be non-GUDI with a pump
- Sodium hypochlorite feed system with two metering pumps
- Clearwell
- Two flow meters: raw and treated
- Chlorine analyzer
- Turbidity analyzers
- Two submersible highlifts
- Standby generator

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Brenntag

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
05/05/2021	153976	Manilla Water Treatment	72 hour data review showed recorded chlorine residuals exceeded maximum 5 minute requirement	Due to short power outages that did not initial backup power starting, analyzer was without power for	O. Reg. 170/03	Samples taken and UPS backup power provided to CL2 analyzer.

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
				approx. 6-7 minutes		

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

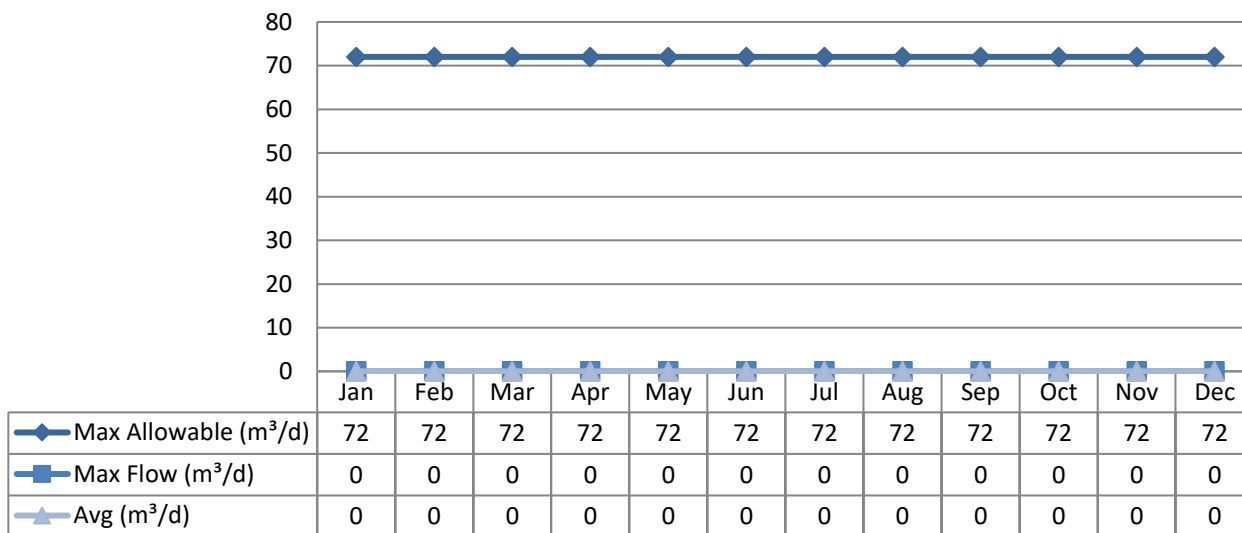
The Woods of Manilla Drinking Water System is operating under half the rated capacity.

Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2021 Raw Flow Data was submitted to the Ministry electronically under permit #2300-AQHK4Y and #2660-C7KSBJ. The confirmation and a copy of the data that was submitted are attached in Appendix A.

Total Monthly Flows (m³/d)

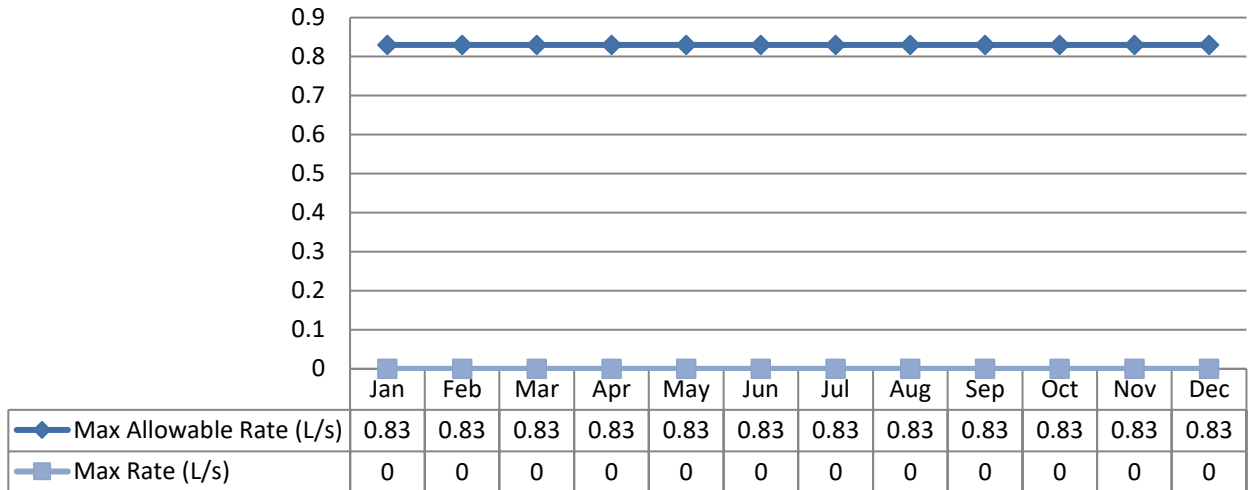
Max Allowable PTTW- Well #1



Note: Well 1 was offline during the reporting period.

Monthly Rated Flows (L/s)

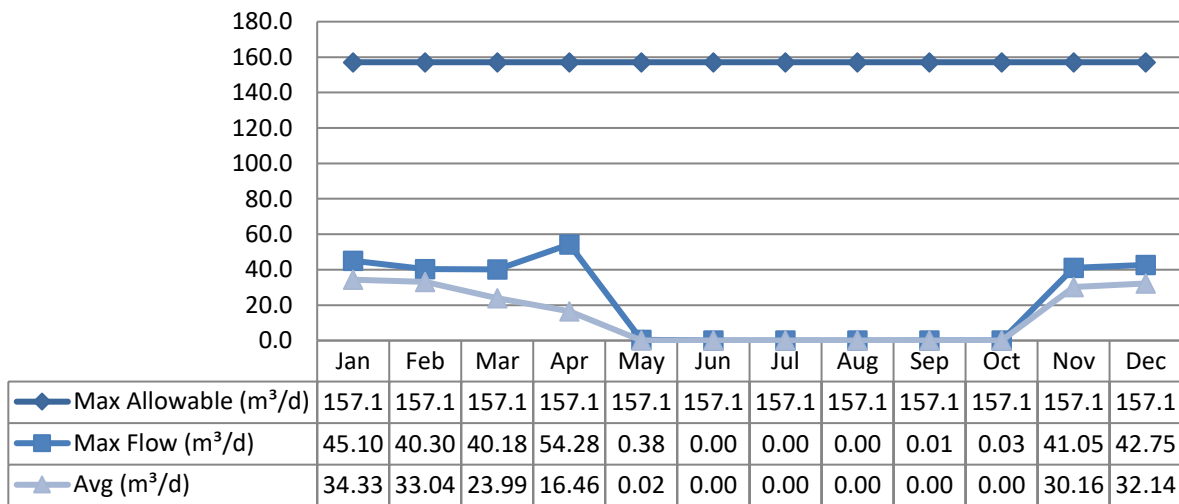
Max allowable rate – PTTW- Well #1



Note: Well 1 was offline during the reporting period.

Total Monthly Flows (m³/d)

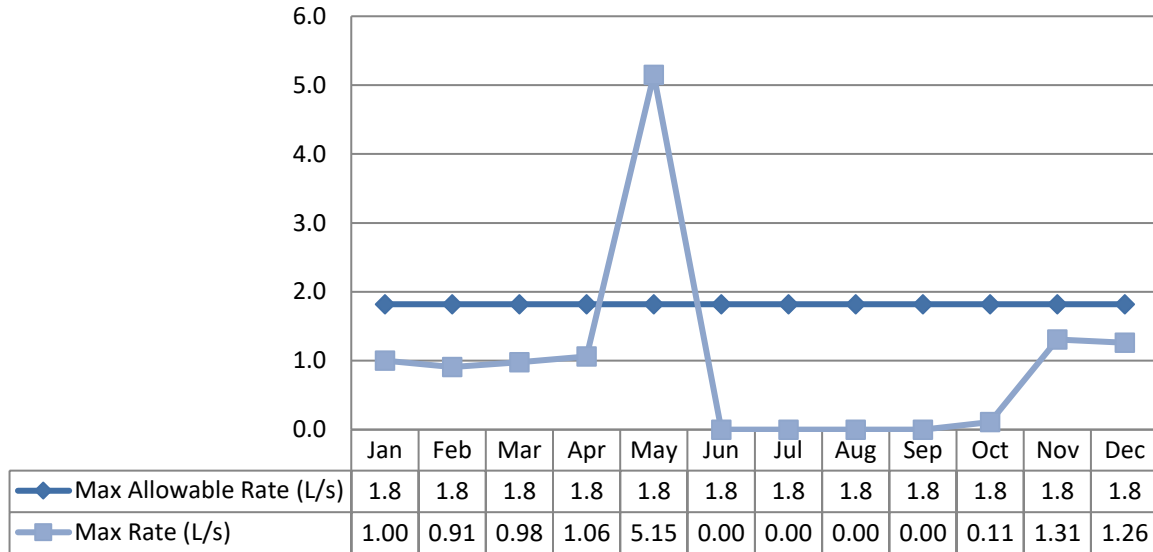
Max Allowable PTTW- Well #2/2A



Note: Water was hauled and supplied from the Lindsay WTP while repairs were being made to Manilla Well II from May until October 2021. New well #2A was connected in October 2021. Well #2 was decommissioned.

Monthly Rated Flows (L/s)

Max allowable rate – PTTW- Well #2/2A



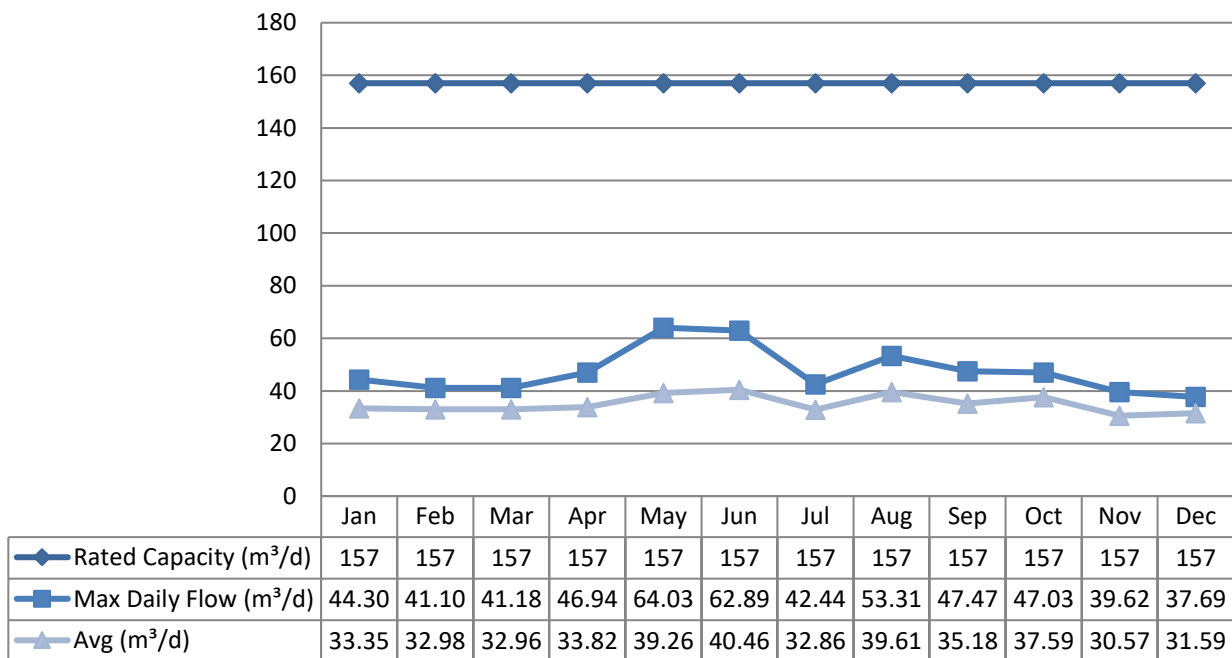
Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s) but these exceedances were short in duration. Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. The significant spike in May was due to scheduled 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.

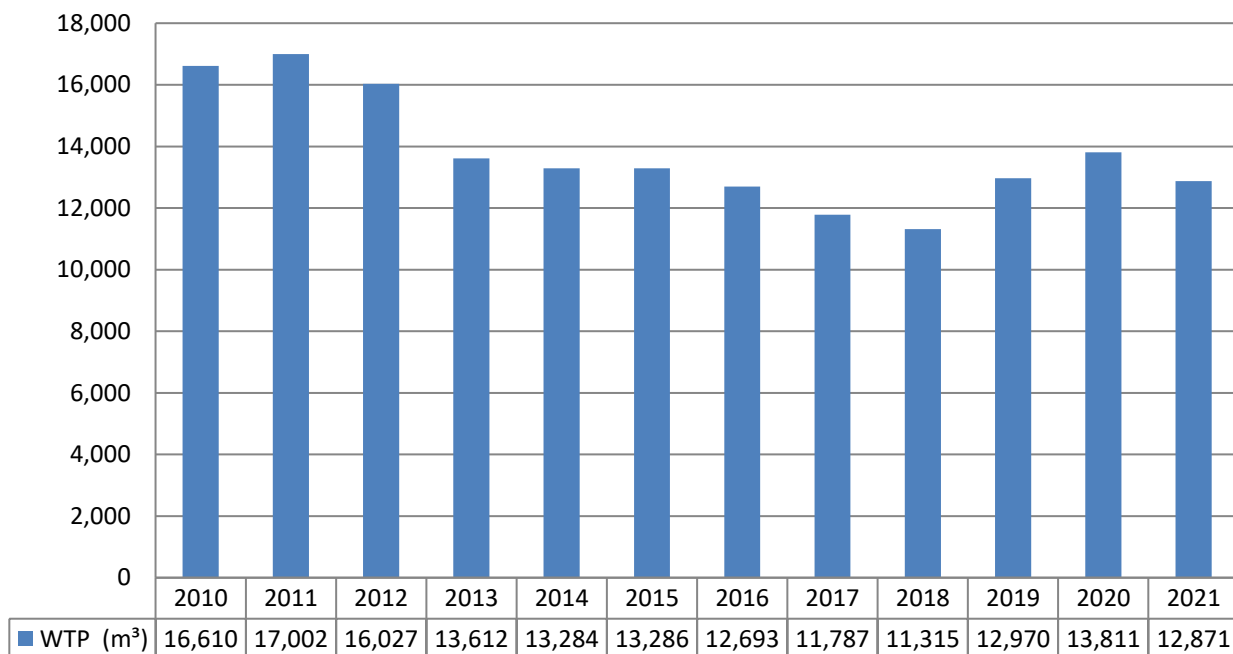
Monthly Rated Flows – Woods of Manilla II

Rated Capacity (m³/d) 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	0						
Raw Well 2/2A	13	0	0	0	4	0	46
Treated	54	0	0	0	0	0	22
Distribution	60	0	0	0	0	0	2

Note: Raw Well 1 was offline during the reporting year. Well #2 was offline May – October 2021 and raw water bacti samples were not collected during this time.

Operational Testing

	No. of Samples Collected	Range of Results	Range of Results
		Minimum	Maximum
Turbidity Well 1 (NTU)	0		
Turbidity Well 2/2A (NTU)	13	0	3.15
Chlorine	8760	0	4.59

	No. of Samples Collected	Range of Results	Range of Results
		Minimum	Maximum
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

Note: Well 1 was offline during the reporting year, Well 2 was offline May – October 2021 and no raw turbidity was taken during this time.

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 170/03. Sodium and Fluoride are required to be tested every 5 years. Nitrate and Nitrite are tested quarterly and the metals are tested every five years as required under 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	Exceedances	Exceedances
				MAC	1/2 MAC
Antimony: Sb (ug/L)	2020/01/06	<MDL 0.09	6.0	No	No
Arsenic: As (ug/L)	2020/01/06	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L)	2020/01/06	176.0	1000.0	No	No
Boron: B (ug/L)	2020/01/06	48.0	5000.0	No	No
Cadmium: Cd (ug/L)	2020/01/06	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L)	2020/01/06	<MDL 0.08	50.0	No	No
Mercury: Hg (ug/L)	2020/01/06	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L)	2020/01/06	<MDL 0.04	50.0	No	No
Uranium: U (ug/L)	2020/01/06	0.022	20.0	No	No
Additional Inorganics					
Fluoride (mg/L)	2020/01/06	0.26	1.5	No	No
Nitrite (mg/L)	2021/01/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2021/04/05	<MDL	1.0	No	No

Treated Water Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances	Exceedances
				MAC	1/2 MAC
		0.003			
Nitrite (mg/L)	2021/07/05	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2021/10/12	<MDL 0.003	1.0	No	No
Nitrate (mg/L)	2021/01/04	0.024	10.0	No	No
Nitrate (mg/L)	2021/04/05	0.020	10.0	No	No
Nitrate (mg/L)	2021/07/05	0.189	10.0	No	No
Nitrate (mg/L)	2021/10/12	0.249	10.0	No	No
Sodium: Na (mg/L)	2020/01/06	17.2	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	No. Of Sampling Points	No. of Samples	Range of Results	Range of Results	MAC (µg/L)	No. Of Exceedances
Alkalinity (mg/L)	2	2	157	169	N/A	N/A
pH	2	2	7.81	8.59	N/A	N/A
Lead (µg/l)	0	0	N/A	N/A	N/A	N/A

Organic Parameters

These parameters are tested every five years 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	Exceedance
				MAC	1/2 MAC
Alachlor (ug/L)	2020/01/06	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L)	2020/01/06	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L)	2020/01/06	<MDL 0.05	20.0	No	No
Benzene (ug/L)	2020/01/06	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L)	2020/01/06	<MDL 0.004	0.01	No	No

Treated Water Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
Bromoxynil (ug/L)	2020/01/06	<MDL 0.33	5.0	No	No
Carbaryl (ug/L)	2020/01/06	<MDL 0.05	90.0	No	No
Carbofuran (ug/L)	2020/01/06	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L)	2020/01/06	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L)	2020/01/06	<MDL 0.02	90.0	No	No
Diazinon (ug/L)	2020/01/06	<MDL 0.02	20.0	No	No
Dicamba (ug/L)	2020/01/06	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L)	2020/01/06	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L)	2020/01/06	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L)	2020/01/06	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L)	2020/01/06	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L)	2020/01/06	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L)	2020/01/06	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)	2020/01/06	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L)	2020/01/06	<MDL 0.4	9.0	No	No
Dimethoate (ug/L)	2020/01/06	<MDL 0.06	20.0	No	No
Diquat (ug/L)	2020/01/06	<MDL 1.0	70.0	No	No
Diuron (ug/L)	2020/01/06	<MDL 0.03	150.0	No	No
Glyphosate (ug/L)	2020/01/06	<MDL 1.0	280.0	No	No
Malathion (ug/L)	2020/01/06	<MDL 0.02	190.0	No	No
Metolachlor (ug/L)	2020/01/06	<MDL 0.01	50.0	No	No
Metribuzin (ug/L)	2020/01/06	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)	2020/01/06	<MDL 0.3	80.0	No	No
Paraquat (ug/L)	2020/01/06	<MDL 1.0	10.0	No	No
PCB (ug/L)	2020/01/06	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L)	2020/01/06	<MDL 0.15	60.0	No	No
Phorate (ug/L)	2020/01/06	<MDL 0.01	2.0	No	No
Picloram (ug/L)	2020/01/06	<MDL 1.0	190.0	No	No
Prometryne (ug/L)	2020/01/06	<MDL 0.03	1.0	No	No
Simazine (ug/L)	2020/01/06	<MDL 0.01	10.0	No	No
Terbufos (ug/L)	2020/01/06	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L)	2020/01/06	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L)	2020/01/06	<MDL 0.2	100.0	No	No
Triallate (ug/L)	2020/01/06	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L)	2020/01/06	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L)	2020/01/06	<MDL 0.25	5.0	No	No
Trifluralin (ug/L)	2020/01/06	<MDL 0.12	100.0	No	No
Vinyl Chloride (ug/L)	2020/01/06	<MDL 0.02	45.0	No	No

Treated Water Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average	2021	91.90	100.0	No	Yes
HAA Total (ug/L) Annual Average	2021	66.40	80.0*	No	Yes

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

MDL = Method Detection Limit

Additional Legislated Samples



There was no additional sampling required.

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

WO #	Description
40972	Replace Chlorine Analyzer
45381	Move Turbidity Analyzer from Treated High lift Discharge to Raw Water Header
40971	Replacement of Well #2 with Well #2A

Appendix A

WTRS Data and Submission Confirmation



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Conservation and Parks

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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: 2300-AQHK4Y
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on: Jan 25, 2022 1:25 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.

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Ministry of the Environment,
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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 25, 2022 1:28 PM

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