

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 2020

Issued: February 10, 2021

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

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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 WTP

Drinking Water System Owner: City of Kawartha Lakes

Drinking Water System Category: Small Municipal Residential

Period Being Reported: January 1, 2020 - December 31, 2020

	# of Events	Date	Details
Health & Safety			
Number of Incidents	0		
Drinking Water			
MECP Inspections	1	August 12, 2020	Announced - Focused Drinking Water Inspection - Final Inspection Rating of 93.93%
AWQI's	0		
Number of Non-Compliances	2	Sept 15, 2020	1) The owner/operating authority was not in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period; 2) Where an activity has occurred that could introduce contamination, all parts of the drinking water system were not disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.

	# of Events	Date	Details
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 2).

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

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:

Legislation	Requirement(s) system failed to meet	Duration of the failure (i.e. date(s))	Corrective Action	Status
Drinking water works permit number 141-206, Schedule B, Condition 2.4	"The verifications and documentation required in condition 4.5 shall be: 4.6.1 Recorded on "Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System", as published by the Ministry of the Environment and Climate Change, prior to the modified or replaced components being placed into service;"	July 31, 2019	Create a procedure on the proper way to complete Form 2 documents as per drinking water works permit 141-206 Schedule B	Complete
Drinking Water Works Permit 141-206 Schedule B, Condition 2.3	The drinking water works permit, section 2.3 states that all parts of the drinking water system in contact with drinking water which are added, modified, replaced, extended or taken out of service for inspection, repair or other activities that may lead to contamination shall	July 31, 2019	Create procedure that details the requirements of Schedule B section 2.0 of the Drinking Water Work Permit and states that the applicable AWWA Standards shall be followed.	Complete

Legislation	Requirement(s) system failed to meet	Duration of the failure (i.e. date(s))	Corrective Action	Status
	be disinfected before being put into service in accordance with provisions of the applicable AWWA standards.			

Flows

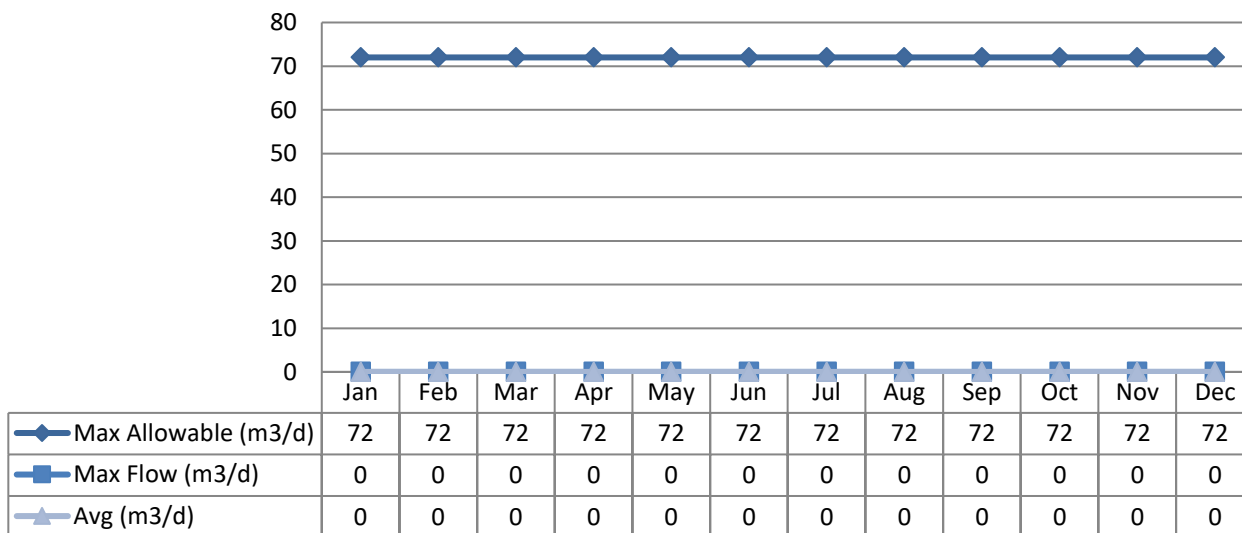
The Woods of Manilla Drinking Water System is operating under half the rated capacity.

Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2020 Raw Flow Data was submitted to the Ministry electronically under permit #2300-AQHK4Y. The confirmation and a copy of the data that was submitted are attached in Appendix A.

Total Monthly Flows (m3/d)

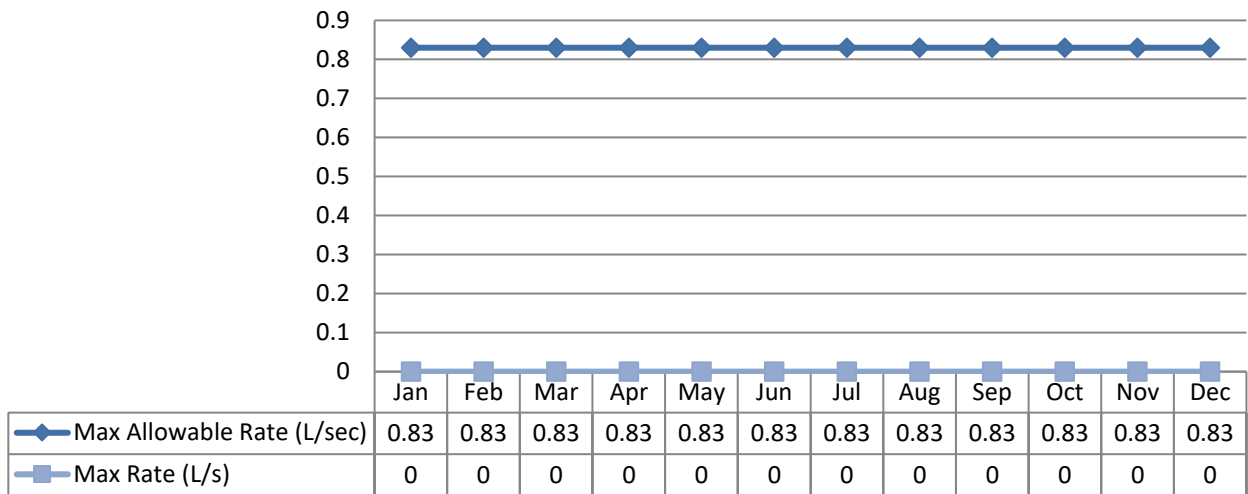
Max Allowable PTTW- Well #1



Note: Well 1 was offline during the reporting period.

Monthly Rated Flows (L/s)

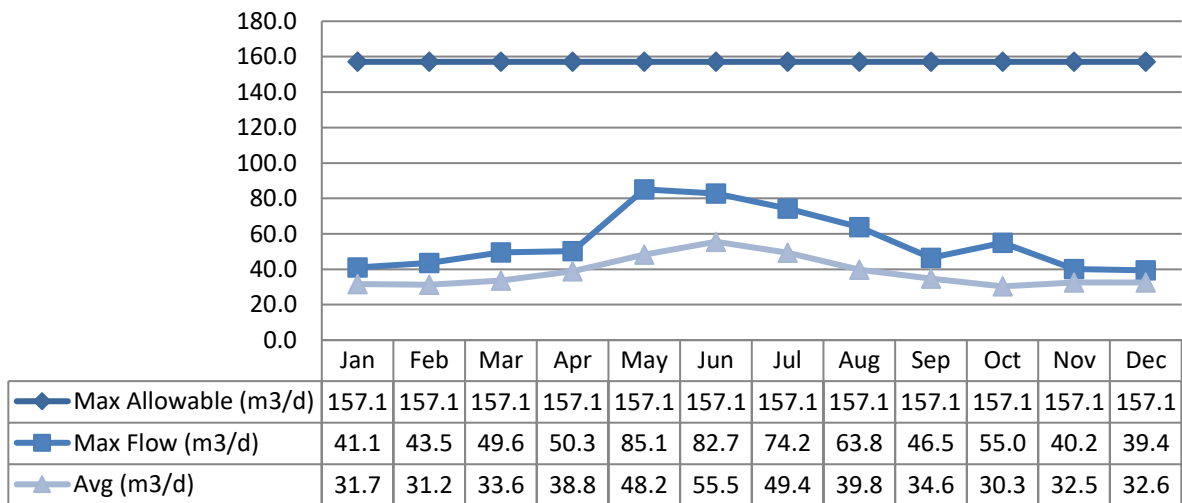
Max allowable rate – PTTW- Well #1



Note: Well 1 was offline during the reporting period.

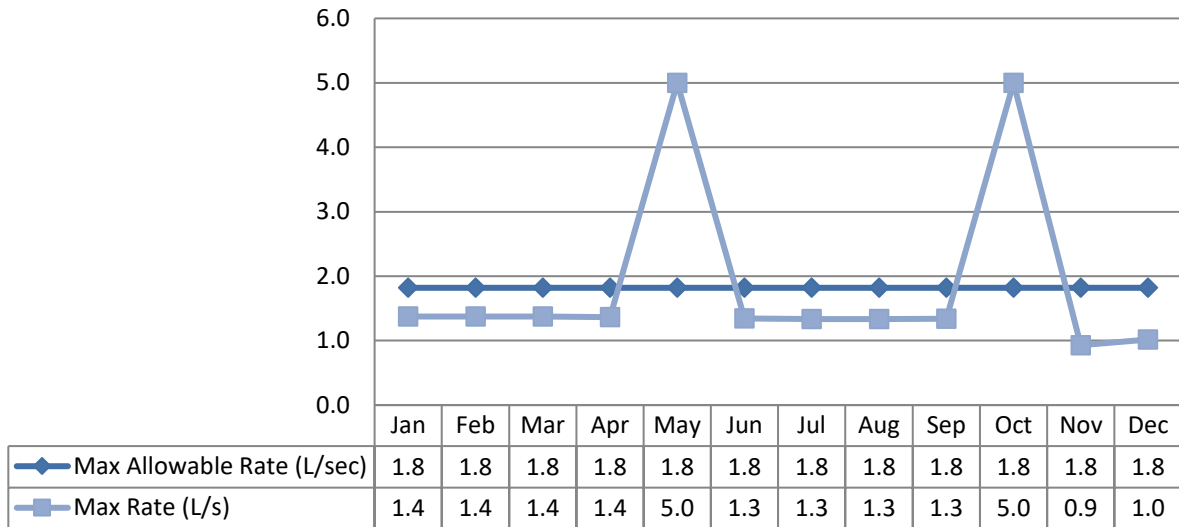
Total Monthly Flows (m3/d)

Max Allowable PTTW- Well #2



Monthly Rated Flows (L/s)

Max allowable rate – PTTW- Well #2



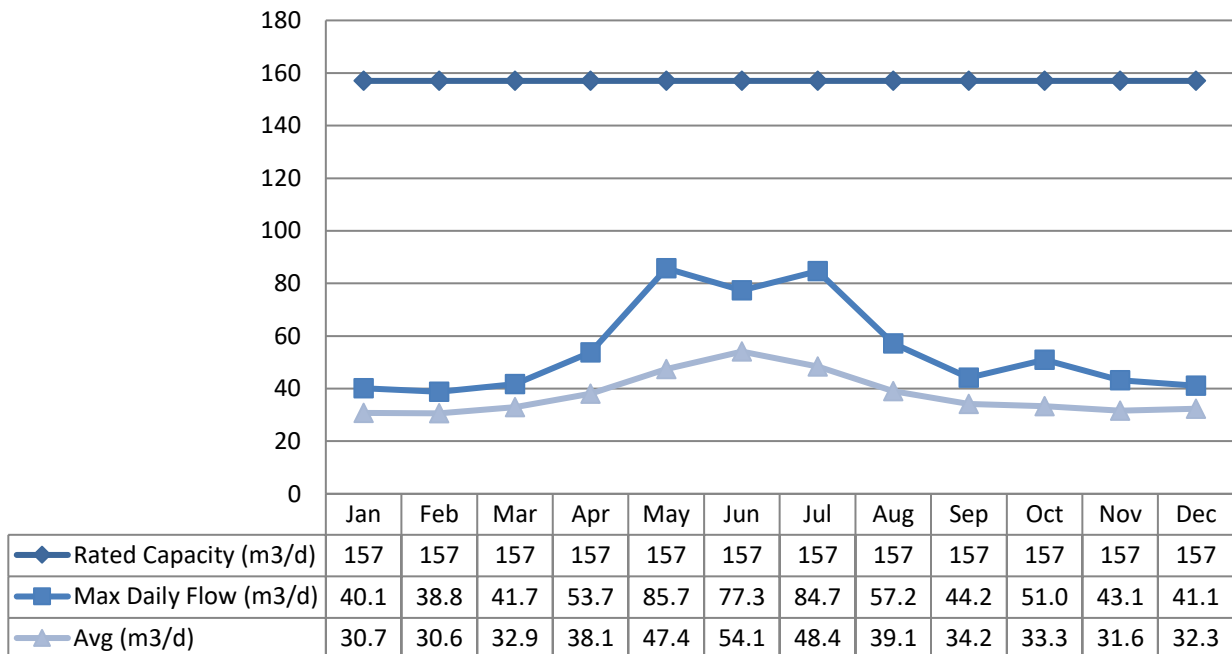
Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s) but these exceedances were short in duration. Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. The significant spike in May was due to scheduled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

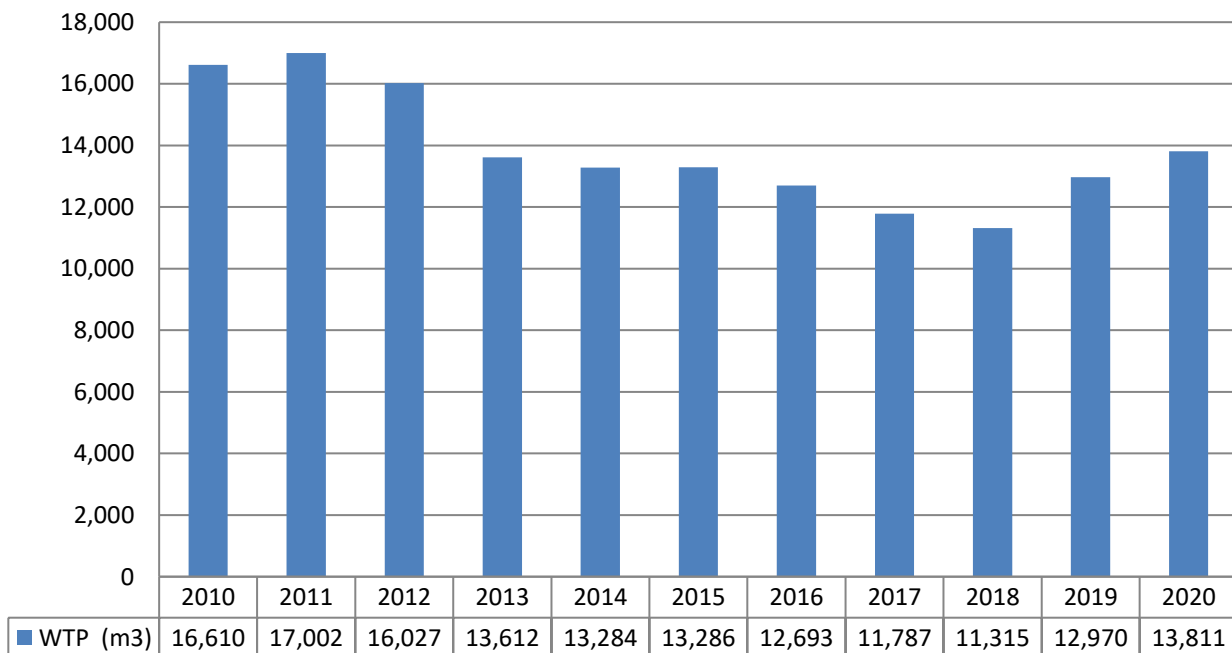
Monthly Rated Flows – Woods of Manilla II

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	30	0	0	0	2	46	46
Treated	2	0	0	0	0		
Distribution	52	0	0	0	0	0	1

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

Operational Testing

	No. of Samples Collected	Range of Results	Range of Results
		Minimum	Maximum
Turbidity Well 1 (NTU)	0		
Turbidity Well 2 (NTU)	33	0.09	2.31
Chlorine	8760	0	4.5
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

Note: Well 1 was offline during the reporting year.

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

Treated Water Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances	Exceedances
				MAC	1/2 MAC
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)	2020/01/06	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2020/04/06	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2020/07/07	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2020/10/05	<MDL 0.003	1.0	No	No
Nitrate (mg/L)	2020/01/06	0.016	10.0	No	No
Nitrate (mg/L)	2020/04/06	0.016	10.0	No	No
Nitrate (mg/L)	2020/07/07	0.015	10.0	No	No
Nitrate (mg/L)	2020/10/05	<MDL 0.006	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	172	172	N/A	N/A
pH	2	2	7.52	7.77	N/A	N/A
Lead (µg/l)	2	2	0.16	0.26	No	0

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
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

Treated Water Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
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
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average	2020	11.95	100.0	No	No
HAA Total (ug/L) Annual Average	2020	5.3	80.0*	No	No

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
1750695	Install Faucet Mount Eyewash

WO #	Description
1918628	Replace Baseboard Heater
1919510	Replace Damaged Drywall and Remove Mould
1917430	Waterproof South Wall and Re-grade Slope

Appendix A

WTRS Data and 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: 2300-AQHK4Y
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on: Feb 5, 2021 1:05 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.