

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 to December 31st, 2019

Issued: February 20, 2020

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 residents. The annual reports are available to residents free of charge at the City of Kawartha Lakes – Public Works Administration Office located at 12 Peel Street in Lindsay, Ontario. The reports are also available online at the [City of Kawartha Lakes website](http://www.kawarthalakes.ca). (www.kawarthalakes.ca)

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, 2019 - December 31, 2019

	# of Events	Date	Details
Health & Safety			
Number of Incidents	1	August 16 2019	Employee scraped wrist on rusted metal frame and needed a tetanus shot.
Drinking Water			
MECP Inspections	1	July 18, 2019	Announced - Focused Drinking Water Inspection - Final Inspection Rating of 100%
AWQI's	0		
Number of Non-Compliances	0		
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:

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 during the reporting period.

Non-Compliance

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

Non-Compliance Identified in a Ministry Inspection

There were no non-compliances identified in a Ministry inspection during the reporting period.

Flows

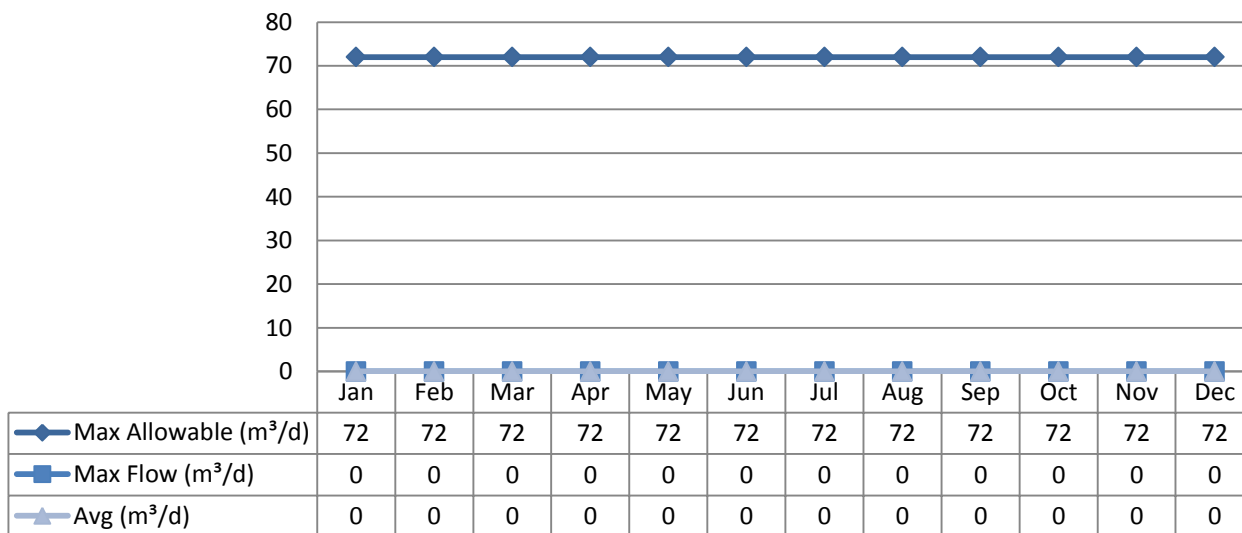
The Woods of Manilla Drinking Water System is operating under half the rated capacity.

Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2019 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.

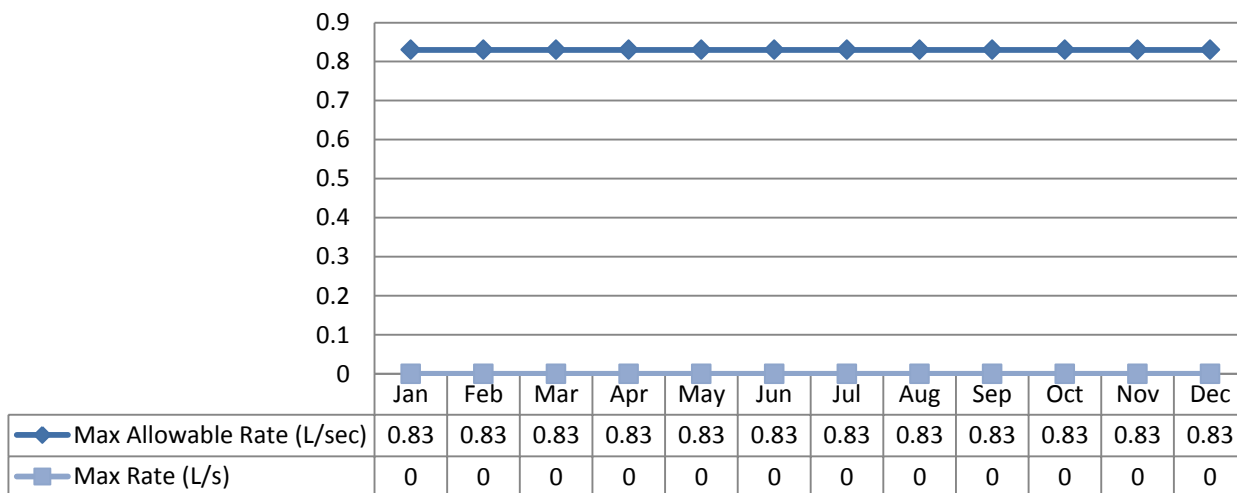
Total Monthly Flows (m³/d)

Max Allowable PTTW- Well #1

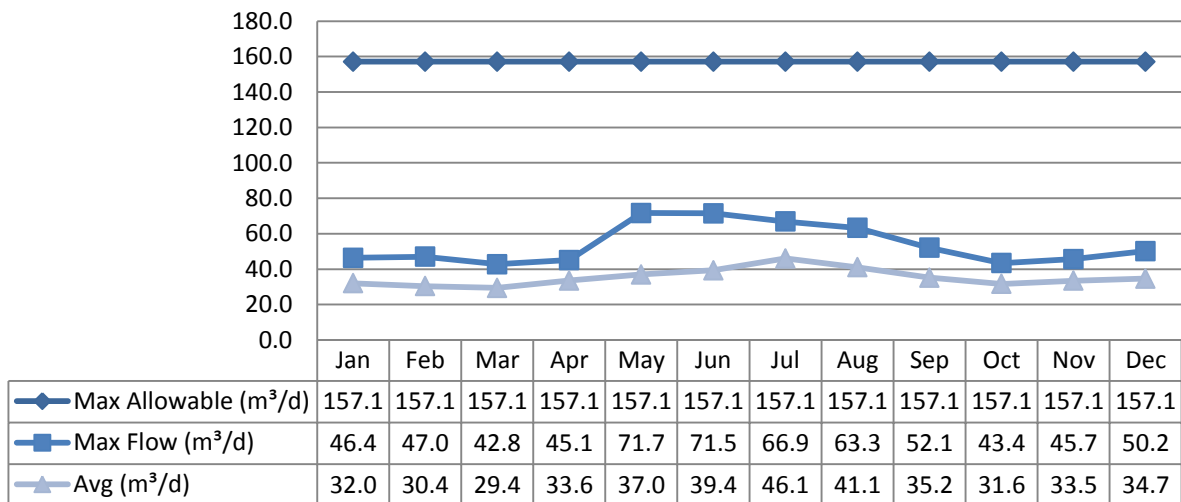
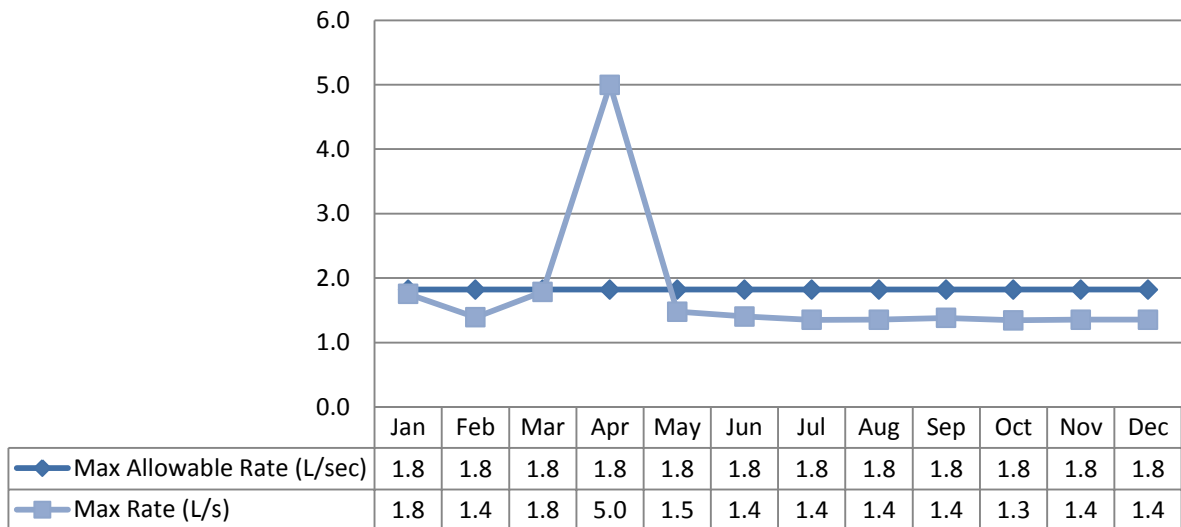


Monthly Rated Flows (L/s)

Max allowable rate – PTTW- Well #1



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

Total Monthly Flows (m³/d)**Max Allowable PTTW- Well #2****Monthly Rated Flows (L/s)****Max allowable rate – PTTW- Well #2**

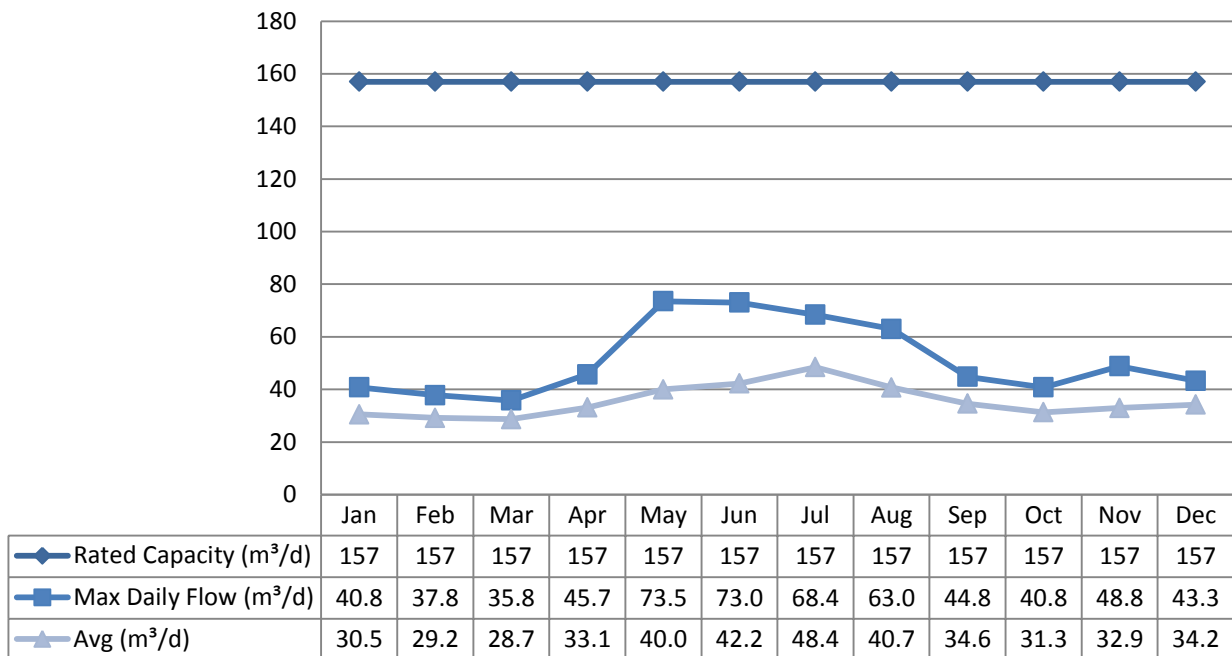
Note: The significant spike in April was due to scheduled Flow Meter calibration.

Treated Water Flows

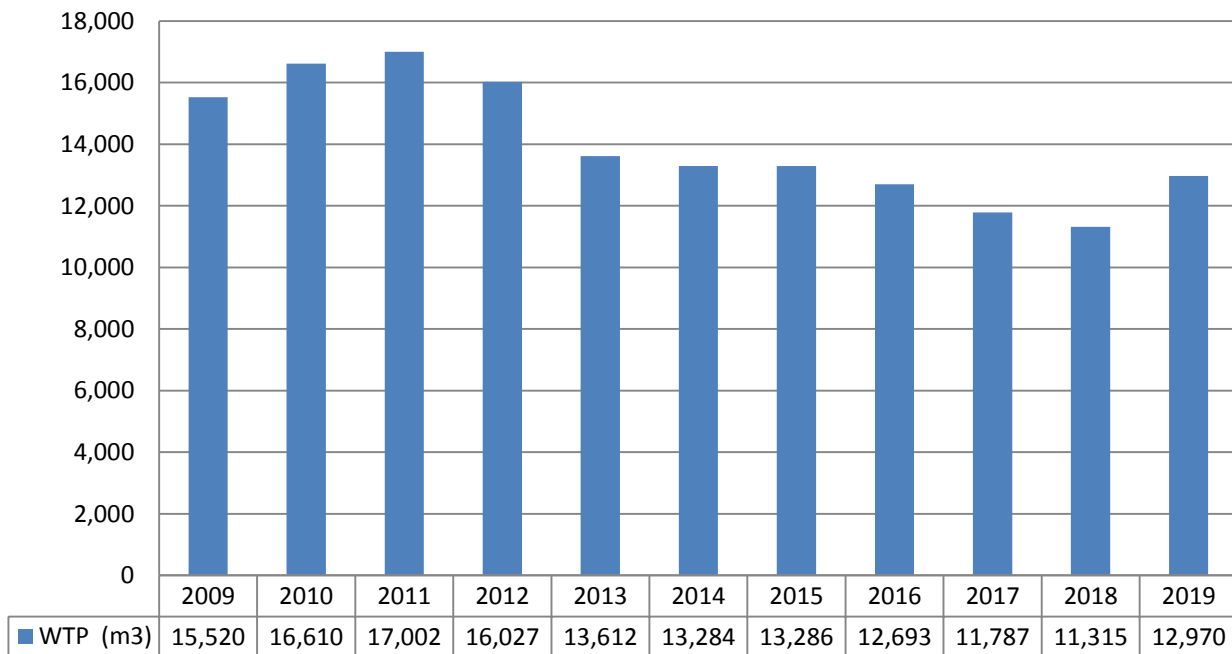
The Treated Water flows are regulated under the Municipal Licence.

Monthly Rated Flows – Woods of Manilla II

Rated Capacity - MDWL

Annual Total Flow Comparison

Total Annual m³



Regulatory Sample Results Summary**Microbiological Testing**

Location	No. of Samples Collected	Range of E.coli Results MIN	Range of E.coli Results MAX	Range of Total Coliform Results MIN	Range of Total Coliform Results MAX	Range of HPC Results MIN	Range of HPC Results MAX
Raw Well 1	0						
Raw Well 2	29	0	0	0	0		
Treated	2	0	0	0	0		
Distribution	53	0	0	0	0	0	2000

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

Operational Testing

Parameter	No. of Samples	Range of Results MIN	Range of Results MAX
Turbidity Well 1 (NTU)	0		
Turbidity Well 2 (NTU)	30	0.1	0.5
Chlorine	8760	0	4.8
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

Note: Woods of Manilla I 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

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances MAC	No. of Exceedances ½ MAC
Treated Water					
Antimony: Sb (ug/L)	2015/01/19	< 0.02	6.0	No	No
Arsenic: As (ug/L)	2015/01/19	< 0.2	10.0	No	No
Barium: Ba (ug/L)	2015/01/19	182.0	1000.0	No	No
Boron: B (ug/L)	2015/01/19	48.1	5000.0	No	No
Cadmium: Cd (ug/L)	2015/01/19	< 0.003	5.0	No	No
Chromium: Cr (ug/L)	2015/01/19	< 0.03	50.0	No	No
Mercury: Hg (ug/L)	2015/01/19	0.01	1.0	No	No
Selenium: Se (ug/L)	2015/01/19	< 1.0	50.0	No	No
Uranium: U (ug/L)	2015/01/19	0.006	20.0	No	No
Additional Inorganics					
Fluoride (mg/L)	2015/02/10	0.23	1.5	No	No
Nitrite (mg/L)	2019/01/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2019/04/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2019/07/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2019/10/07	<MDL 0.003	1.0	No	No
Nitrate (mg/L)	2019/01/08	0.02	10.0	No	No
Nitrate (mg/L)	2019/04/08	0.01	10.0	No	No
Nitrate (mg/L)	2019/07/08	0.02	10.0	No	No
Nitrate (mg/L)	2019/10/07	0.02	10.0	No	No
Sodium: Na (mg/L)	2020/01/07	17.2	20*	No	No

*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 (MIN)	Range of Results (MAX)	MAC (ug/L)	Number of Exceedances
Alkalinity (mg/L)	2	2	161	168	N/A	N/A
pH	2	2	7.77	8.11	N/A	N/A
Lead (ug/l)	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.

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances (MAC)	Number of Exceedances (1/2 MAC)
Treated Water					
Alachlor (ug/L)	2015/01/19	< 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L)	2015/01/19	< 0.01	5.00	No	No
Azinphos-methyl (ug/L)	2015/01/19	< 0.02	20.00	No	No
Benzene (ug/L)	2015/01/19	< 0.32	1.00	No	No
Benzo(a)pyrene (ug/L)	2015/01/19	< 0.004	0.01	No	No
Bromoxynil (ug/L)	2015/01/19	< 0.33	5.00	No	No
Carbaryl (ug/L)	2015/01/19	< 0.01	90.00	No	No
Carbofuran (ug/L)	2015/01/19	< 0.01	90.00	No	No
Carbon Tetrachloride (ug/L)	2015/01/19	< 0.16	2.00	No	No
Chlorpyrifos (ug/L)	2015/01/19	< 0.02	90.00	No	No
Diazinon (ug/L)	2015/01/19	< 0.02	20.00	No	No
Dicamba (ug/L)	2015/01/19	< 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L)	2015/01/19	< 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L)	2015/01/19	< 0.36	5.00	No	No
1,2-Dichloroethane (ug/L)	2015/01/19	< 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L)	2015/01/19	< 0.33	14.00	No	No
Dichloromethane	2015/01/19	< 0.35	50.00	No	No

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances (MAC)	Number of Exceedances (1/2 MAC)
(Methylene Chloride) (ug/L)					
2,4-Dichlorophenol (ug/L)	2015/01/19	< 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)	2015/01/19	< 0.19	100.00	No	No
Diclofop-methyl (ug/L)	2015/01/19	< 0.4	9.00	No	No
Dimethoate (ug/L)	2015/01/19	< 0.03	20.00	No	No
Diquat (ug/L)	2015/01/19	< 1.0	70.00	No	No
Diuron (ug/L)	2015/01/19	< 0.03	150.00	No	No
Glyphosate (ug/L)	2015/01/19	< 1.0	280.00	No	No
Malathion (ug/L)	2015/01/19	< 0.02	190.00	No	No
Metolachlor (ug/L)	2015/01/19	< 0.01	50.00	No	No
Metribuzin (ug/L)	2015/01/19	< 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)	2015/01/19	< 0.3	80.00	No	No
Paraquat (ug/L)	2015/01/19	< 1.0	10.00	No	No
PCB (ug/L)	2015/01/19	< 0.04	3.00	No	No
Pentachlorophenol (ug/L)	2015/01/19	< 0.15	60.00	No	No
Phorate (ug/L)	2015/01/19	< 0.01	2.00	No	No
Picloram (ug/L)	2015/01/19	< 1.0	190.00	No	No
Prometryne (ug/L)	2015/01/19	< 0.03	1.00	No	No
Simazine (ug/L)	2015/01/19	< 0.01	10.00	No	No
Terbufos (ug/L)	2015/01/19	< 0.01	1.00	No	No
Tetrachloroethylene (ug/L)	2015/01/19	< 0.35	10.00	No	No
2,3,4,6- Tetrachlorophenol (ug/L)	2015/01/19	< 0.2	100.00	No	No
Triallate (ug/L)	2015/01/19	< 0.01	230.00	No	No
Trichloroethylene (ug/L)	2015/01/19	< 0.44	5.00	No	No
2,4,6-Trichlorophenol (ug/L)	2015/01/19	< 0.25	5.00	No	No
Trifluralin (ug/L)	2015/01/19	< 0.02	45.00	No	No
Vinyl Chloride (ug/L)	2015/01/19	< 0.17	1.00	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average	2019	13.0	100.00	No	No
HAA Total (ug/L) Annual Average	2019	5.3	N/A	N/A	N/A

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
627973	Highlift and VFD installation project

Appendix A

WTRS Data and Submission Confirmation

Water Taking Data submitted successfully.
Confirmation:
<p>Thank you for submitting your water taking data online.</p> <p>Permit Number: 2300-AQHK4Y Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES. Received on: Feb 5, 2020 1:06 PM</p> <p>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.</p>