

## 2021 Year End Report: MacTier Potable Water Plant (PWP)



Drinking Water Works Permit: 143-207

Municipal Drinking Water License: 143-107

Ministry of Environment, Conservation and Parks Waterworks #: 220004224

Engineering and Public Works Department

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## Introduction

The MacTier Potable Water Plant serving the community of MacTier is owned and operated by the District Municipality of Muskoka.

It constructed in 1995 and has an initial design capacity of 1904 meters cubed per day. The water system currently serves 277 customer service connections.

The plant operates under license 143-107 and permit 143-207, issued in September 2020 under the Municipal Drinking Water Licensing Program. The plant also presently operates under Ministry of Environment, Conservation and Parks (MECP) permit to take water #0170-AXBLGH (expires May 2028), which permits the operation of up to 1,428 meters cubed per day. The Raw Water intake structure is located Stewart Lake approximately 11 meters deep and 220 meters from shore.

The plant process is a conventional package filtration plant, with supplementary pH adjustment. The facility includes an intake crib, intake pipe, fixed screen, and a low lift pumping station. The treatment plant consists of flash mixing, variable speed flocculators, and two (2) dual media filters. Also located at the treatment plant are two (2) backwash holding tanks, two (2) contact chambers, one (1) clearwell, four (4) high lift pumps, two (2) backwash pumps, chemical storage, preparation, and feed equipment. The treatment plant system features chemical treatment consisting of Sodium Permanganate (Manganese control), hydrated lime, carbon dioxide (corrosion control), Powdered Activated Carbon (Taste and Odours), Polyaluminum chloride (coagulation), sodium hydroxide (pH control) and Sodium hypochlorite (disinfection). The addition of hydrofluorosilic acid (fluoridation) to prevent tooth decay completes the treatment process.

The distribution system includes a 1,200 meters cubed elevated storage tank with provisions for re-chlorination.

All treatment control systems use a Supervisory Control And Data Acquisition (SCADA) system for process control and monitoring.

## Legislation Requirements

### Safe Drinking Water Act

In the Part Two Report of the Walkerton Inquiry, Commissioner Dennis O'Connor recommended that the Ontario Government enact a Safe Drinking Water Act to deal with matters related to treatment and distribution of drinking water. The Safe Drinking Water Act (SDWA) received royal assent in December, 2002.

The purpose of the Act is to gather in one place all legislation and regulations relating to the treatment and distribution of drinking water. The Act serves to protect human health through the control and regulation of drinking water systems and drinking water testing.

The foundation provisions of the Safe Drinking Water Act include:

- Purpose of the Act
- Definitions
- Minister's Powers and Duties
- Inspections

- Compliance and Enforcement
- Appeals and Offences

### Ontario Regulations

The Ontario Government has enacted several supporting regulations under the SDWA (2002). These regulations combine previous requirements under the Ontario Water Resources Act and the new requirements under the SDWA. Key components of the regulations include

- System Categories
- Groundwater Under Direct Influence Of Surface Water (GUDI)
- Exemptions
- Approval of Systems
- Treatment
- Testing and Operational Checks (General Rules)
- Operational Checks
- Microbiological Testing
- Chemical Testing
- Adverse Conditions
- Corrective Action
- Engineer's and Summary Reports

### Municipal Drinking Water Licenses / Certificates of Approval

The Municipal Drinking Water Licensing Program has replaced the Certificate of Approval program for municipal residential drinking water systems. The Ontario Government has implemented the Municipal Drinking Water Licensing Program (MDWLP) as recommended by Justice O'Connor in the Part II Report of the Walkerton Inquiry. Justice O'Connor recommended a new approvals framework for municipal drinking water systems, which would require owners to obtain a license to operate their systems as well as incorporate the concept of quality management into their operations.

A municipal drinking water license is an approval issued by the MECP to owners under the Safe Drinking Water Act, 2002 for the operation of municipal residential drinking water systems. The District of Muskoka operated under various Certificates of Approval until October 2010 when the operating licenses were issued.

Previous Certificates of Approval were required for the establishment, replacement or alteration of all municipal drinking water systems. The MECP issued Certificates of Approval to ensure that all undertakings comply with the legislation (i.e. Acts and Regulations) and the Ministry's Environmental Guidelines and Procedures developed to provide consistency of approach to various aspects of environmental protection throughout the province. Municipal Drinking Water Licenses and Permits similar to previous Certificates of Approval provide specific details about the drinking water system including:

- Drinking Water System Description
- Definitions and Information
- General Information – Compliance, Other Legal Requirements, Adverse Effects, Inspections
- Performance – Rated Capacity, Management of Residue
- Monitoring and Recording – Flow Measuring Devices, Sampling
- Operations and Maintenance

### Comparison to Rated Capacity and Flow Rates

The MacTier Potable Water Plant has a rated capacity of 1,904 meters cubed per day. In 2021, the monthly average flow for the year was 235.3 meters cubed per day. The maximum day flow for the year was 519.7 meters cubed per day, however the 3-year average for maximum day flow is 532 meters cubed per day. This represents 28% of the plant design capacity. No problems have been associated with this flow.

Monthly flows are shown in the attached table

The Permit to Take Water (PTTW #0170-AXBLGH) permits 1,428.5 meters cubed per day, therefore there were no exceedances of this permit.

### Summary of Analytical Results

A total of 644 microbiological regulatory tests were performed in 2021 and compliance with Provincial standards was achieved throughout the entire year.

There were 156 free chlorine residual tests performed in the distribution system and all results were satisfactory. Staff continue to routinely sample all areas of the system to ensure adequate free chlorine residuals are available throughout the distribution system.

A summary of other analytical results is also shown in this report.

### Summary of Treatment Chemicals

The following chemicals are used for the treatment of drinking water at the MacTier PWP:

- Lime: pH and Alkalinity Adjustment
- Co<sub>2</sub>: pH Adjustment
- Poly Aluminum Chloride: Primary Coagulant
- Sodium Hypochlorite: Disinfection
- Hydrofluosilicic Acid: Fluoride
- Sodium Hydroxide: pH Adjustment
- Sodium Permanganate: Manganese Control
- Polymer: Coagulant Aid (provisional)

A table summarizing the chemical use and average dosages is included in this report

### Documentation of System Repairs and Upgrades

Follow-up of deficiencies from 2020 lifecycle replacements addressed.

### External Audits

#### MECP Inspection

A MECP inspection was completed on September 16<sup>th</sup>, 2021. The overall rating was 100%.

#### DWQMS Audit

In 2021, all drinking water systems within the District had an external reaccreditation audit performed. There were no minor non-conformances reported and all drinking water systems have been recertified. Overall, all drinking water systems are performing satisfactorily.

### MacTier Water Distribution Summary 2021

#### New Services:

A total of zero (0) new customers connected to existing serviced properties in 2021.

#### Broken Watermains:

There were no broken watermains to report in 2021.

#### Service Leaks:

There were three (3) service leaks reported and repaired in 2021, these were private side leaks and not Municipal.

#### Service Relocation:

There were no service relocations to report in 2021.

#### Frozen Services:

No municipal water services were frozen in 2021.

#### Replacement Watermains:

No watermain replacement occurred in 2021.

#### New Watermains:

There was 479 meters of 150 mm water main installed in Middleton Subdivision.

#### Valve Replacement:

No mainline valve replacement took place in 2021.

#### Fire Hydrants:

There are 58 Municipally assumed hydrants maintained by the District of Muskoka in MacTier All hydrants were pumped dry in the fall and scoped during the winter months to ensure they are not susceptible to freezing. Two (2) of the 58 hydrants were newly installed in 2021 in the Middleton Subdivision.

#### Meter Installations:

A total of eight (8) water meters were replaced in MacTier in 2021 as part of the aged meter change out program. The average meter age in MacTier is 15 years.

#### Turn Ons/Offs:

District field staff responded to thirty (30) turn on/off requests in 2021

#### Air-Vacuum Release Valves:

Five (5) air release valves were inspected and tested for proper operation in 2021. Each of the chambers was inspected and pumped out as required.

#### Locates:

District operations completed twenty three (23) buried utility locate requests in 2021 to comply with Ontario OneCall requests.

*Table 1 Water Flow Summary - 2021*

<b>Month</b>	<b>Total Monthly (m<sup>3</sup>)</b>	<b>Average Day Flow (m<sup>3</sup>/d)</b>	<b>Maximum Day Flow (m<sup>3</sup>/d)</b>	<b>Minimum Day Flow (m<sup>3</sup>/d)</b>
<b>January</b>	6,218	201	509	0
<b>February</b>	5,385	192	332	113
<b>March</b>	5,806	187	248	110
<b>April</b>	6,009	200	340	54
<b>May</b>	7,707	249	406	127
<b>June</b>	7,915	264	480	164
<b>July</b>	8,220	265	520	175
<b>August</b>	8,217	265	430	147
<b>September</b>	7,231	241	339	138
<b>October</b>	8,345	269	503	150
<b>November</b>	7,397	247	374	140
<b>December</b>	7,344	237	338	143

Total Flow: 85,793m<sup>3</sup>  
 Average Day: 235.3m<sup>3</sup>  
 Maximum Day: 519.7m<sup>3</sup>  
 Minimum Day: 0.0m<sup>3</sup>

*Table 2 Raw Water Monthly Analysis Summary 2021 Part 1*

<b>Month</b>	<b>Alkalinity (mg/L)</b>	<b>Hardness (mg/L)</b>	<b>pH</b>	<b>Turbidity (ntu)</b>	<b>True Colour (tcu)</b>	<b>Temperature (Celsius)</b>
<b>January</b>	31.2	30.5	7.6	1.1	25	6.2
<b>February</b>	29.2	29.7	7.5	0.9	30	6.5
<b>March</b>	27.9	28.9	7.4	0.9	30	6.6
<b>April</b>	27.7	28.5	7.0	1.1	35	8.9
<b>May</b>	27.7	27.0	7.0	0.8	32	10.6
<b>June</b>	29.1	29.0	6.9	0.9	31	11.7
<b>July</b>	29.8	28.0	6.9	0.9	36	11.8
<b>August</b>	28.0	28.0	6.8	1.0	34	11.8
<b>September</b>	29.2	30.0	6.7	1.5	39	11.6
<b>October</b>	31.2	31.0	6.8	2.0	35	10.9
<b>November</b>	32.0	32.0	6.9	1.3	36	10.5
<b>December</b>	30.6	31.0	6.9	1.4	49	6.8
<b>Average</b>	29.5	29.5	7.0	1.2	34.3	9.5



Table 3 Raw Water Monthly Analysis Summary 2021 Part 2

Month	Microcystin (ug/L)	Conductivity uS/cm	Langliers Saturation Index	Total Coliforms (CFU/100mL)	E. Coli (CFU/100mL)	Total Number of Samples
January	Not Sampled	170.6	-1.4	6.0	0.3	4
February	Not Sampled	172.9	-1.7	1.5	0.0	4
March	Not Sampled	179.3	-1.7	1.0	0.0	5
April	Not Sampled	164.3	-1.8	3.8	0.0	4
May	Not Sampled	146.0	-1.8	11.8	0.4	5
June	<0.1ug/L	152.4	-2.1	6.5	0.0	4
July	<0.1ug/L	150.4	-2.2	9.0	0.5	4
August	<0.1ug/L	153.0	-2.1	6.0	0.4	5
September	<0.1ug/L	153.2	-2.2	2.8	0.8	4
October	<0.1ug/L	157.3	-2.3	9.0	2.0	4
November	<0.1ug/L	154.9	-2.1	22.0	2.8	5
December	Not Sampled	158.2	-2.0	20.0	1.0	4
Average	<0.1ug/L	159.4	-2.0	8.3	0.7	4

*Table 4 Chemical Usage Summary: Hydrated Lime*

Month	Average Dosage mg/L	Total kg
January	28.5	206.8
February	28.5	164.8
March	28.5	183.3
April	28.5	199.2
May	28.5	237.7
June	28.5	245.5
July	28.5	252.0
August	28.5	251.8
September	28.5	222.9
October	28.5	259.4
November	28.5	228.4
December	28.5	227.5
Average	29	223.3

Total Yearly Kilograms: 2,679kg

*Table 5 Chemical Usage Summary: Carbon Dioxide*

Month	Average Dosage mg/L	Total kg
January	34.5	246.4
February	26.4	150.9
March	16.6	107.2
April	14.5	101.2
May	13.8	113.9
June	11.5	98.1
July	10.3	88.5
August	7.6	67.2
September	8.5	61.8
October	0.8	6.9
November	13.0	103.5
December	16.9	135.0
Average	15	107

Total Yearly Kilograms: 1,281kg

*Table 6 Chemical Usage Summary: Coagulant*

Month	Average Dosage mg/L	Total kg
January	29.9	219
February	31.0	179
March	31.0	200
April	31.3	219
May	31.8	265
June	31.8	274
July	32.2	285
August	32.4	287
September	29.8	236
October	27.9	254
November	30.8	247
December	32.0	255
Average	31	243

Total Yearly Kilograms: 2,918kg

*Table 7 Chemical Usage Summary: Sodium Hydroxide*

Month	Average Dosage mg/L	Total kg
January	9.4	58
February	9.2	50
March	9.2	54
April	8.6	51
May	8.0	61
June	8.0	63
July	8.0	65
August	8.0	65
September	8.0	57
October	8.0	66
November	8.0	59
December	8.0	58
Average	8.3	59

Total Yearly Kilograms: 709kg

*Table 8 Chemical Usage Summary: Fluoride*

Month	Average Dosage mg/L	Total kg
January	0.75	5.2
February	0.78	4.3
March	0.78	4.8
April	0.55	3.6
May	0.50	4.0
June	0.50	4.2
July	0.50	4.3
August	0.50	4.3
September	0.59	4.4
October	0.65	5.7
November	0.65	5.0
December	0.65	5.0
Average	0.62	5

Total Yearly Kilograms: 55kg

*Table 9 Chemical Usage Summary: Chlorine*

Month	Average Dosage mg/L	Total kg
January	3.60	24.8
February	3.20	17.5
March	3.20	19.8
April	3.21	21.5
May	3.36	27.1
June	3.36	28.0
July	3.52	30.3
August	3.66	31.4
September	3.66	27.7
October	3.66	32.1
November	3.53	27.3
December	3.46	26.7
Average	3.49	28

Total Yearly Kilograms: 314kg

*Table 10 Chemical Usage Summary: Sodium Permanganate*

Month	Average Dosage mg/L	Total kg
January	0.0	0
February	0.0	0
March	0.0	0
April	0.0	1
May	0.0	0
June	0.0	0
July	0.0	0
August	0.9	164
September	1.5	229
October	1.3	58
November	1.1	44
December	0.1	5
Average	0.4	42

Total Yearly Kilograms: 501kg



## Mactier Certification of Reports

I certify that the information in this document and all attachments are correct, accurate, and complete to the best of my knowledge

Michael Spicer  
Director, Water and Wastewater Services

Stewart Hurd  
Manager of Water and Wastewater Operations

Disclaimer: The following pages are not in an accessible format.

**ANNUAL REPORT**

<b>Drinking-Water System Number:</b>	220004224
<b>Drinking-Water System Name:</b>	Beech Avenue (MacTier) Drinking Water System
<b>Drinking-Water System Owner:</b>	District Municipality of Muskoka
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 01 to December 31, 2021

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ X ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X ] No [ ]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;">                 District Municipality of Muskoka                  70 Pine Street                  Bracebridge, Ontario                  P1L 1N3                  (705) 645-6764                  www.muskoka.on.ca             </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:  <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">N.A.</div> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve?                  Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to:  <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">N.A.</div> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?                  Yes [ ] No [ ]</p>
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**Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report**

**List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:**

Drinking Water System Name	Drinking Water System Number
N.A.	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?  
 Yes [ ] No [ ]

**Indicate how you notified system users that your annual report is available, and is free of charge.**

- Public access/notice via the web**
- Public access/notice via Government Office**
- Public access/notice via a newspaper**
- Public access/notice via Public Request**
- Public access/notice via a Public Library**
- Public access/notice via other method** \_\_\_\_\_

**Describe your Drinking-Water System**

The water treatment plant serving the community of MacTier was constructed in 1995. The treatment process consists of chemically assisted coagulation-flocculation, sedimentation and filtration using multi-media filters with a combination of gravel, sand and anthracite coal. Disinfection in a post-treatment chlorine contact chamber is followed by final pH adjustment before the treated water is pumped to our customers. Our waterworks currently serves a population of approximately 740 persons. The rated water production capacity of the plant is 1,904 cubic meters per day. Our raw water source is Stewart Lake and the intake is located 1.5 meters above the lakebed at a depth of 11 meters and about 220 meters from shore.

**List all water treatment chemicals used over this reporting period**

Sodium Hypochlorite, Polyaluminum Chloride, Sodium Hydroxide, Carbon Dioxide, Hydrated Lime, Fluoride, Sodium Permanganate

**Were any significant expenses incurred to?**

- Install required equipment
- Repair required equipment
- Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

**Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre**

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
May 03, 2021	Sodium	24.7	mg/L	Resampled (27mg/L)	May 25, 2021
May 25, 2021	Sodium	27/17.6	mg/L	Resampled (27mg/L/17.6mg/L)	Closed

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	0-6	0-47	0	N/A
Treated	52	0-0	0-0	52	0-1
Distribution	157	0-0	0-0	70	0-13

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.**

	Number of Grab Samples	Range of Results (min #)-(max #)	Geometric Mean Average
Turbidity	8760	0.00-0.06 NTU	0.027 NTU
Chlorine	8760	1.18-2.09 mg/L	1.57 mg/L
Fluoride (If the DWS provides fluoridation)	8760	0.00-0.82 mg/L	0.63 mg/L

***NOTE:** For continuous monitors use 8760 as the number of samples.*

***NOTE:** Record the unit of measure if it is **not** milligrams per litre.  
MDL = Method Detection Limit*

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

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
N.A.				

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	May 03/2021	0.09<MDL	µg/L	No
Arsenic	May 03/2021	0.2<MDL	µg/L	No
Barium	May 03/2021	11	µg/L	No
Boron	May 03/2021	6	µg/L	No
Cadmium	May 03/2021	0.005	µg/L	No
Chromium	May 03/2021	0.31	µg/L	No
*Lead	May 03/2021		µg/L	No
Mercury	May 03/2021	0.01<MDL	µg/L	No
Selenium	May 03/2021	0.04	µg/L	No
Sodium	May 03/2021	24.7	mg/L	Yes*
Uranium	May 03/2021	0.002<MDL	µg/L	No

<b>Fluoride</b>	May 03/2021	0.43	mg/L	No
<b>Nitrite</b>	Feb 01/2021	0.003<MDL	mg/L	No
<b>Nitrate</b>	Feb 01/2021	0.076	mg/L	No
<b>Nitrite</b>	May 03/2021	0.003<MDL	mg/L	No
<b>Nitrate</b>	May 03/2021	0.134	mg/L	No
<b>Nitrite</b>	Aug 03/2021	0.003<MDL	mg/L	No
<b>Nitrate</b>	Aug 03/2021	0.192	mg/L	No
<b>Nitrite</b>	Nov 01/2021	0.003<MDL	mg/L	No
<b>Nitrate</b>	Nov 01/2021	0.189	mg/L	No

\*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems.

### Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Geometric Mean Average	Unit of Measure	Number of Exceedances
<b>Plumbing</b>	0	N.A.	N.A.	µg/L	N.A.
<b>Distribution</b>	4	0.06-0.10	0.08	µg/L	0

### Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<b>Alachlor</b>	May 03/2021	0.02<MDL	µg/L	No
<b>Atrazine+N-dealkylated Metabolites</b>	May 03/2021	0.01<MDL	µg/L	No
<b>Azinphos-methyl</b>	May 03/2021	0.05<MDL	µg/L	No
<b>Benzene</b>	May 03/2021	0.32<MDL	µg/L	No
<b>Benzo(a)pyrene</b>	May 03/2021	0.004<MDL	µg/L	No
<b>Bromoxynil</b>	May 03/2021	0.33<MDL	µg/L	No
<b>Carbaryl</b>	May 03/2021	0.05<MDL	µg/L	No
<b>Carbofuran</b>	May 03/2021	0.01<MDL	µg/L	No
<b>Carbon Tetrachloride</b>	May 03/2021	0.17<MDL	µg/L	No
<b>Chorpyrifos</b>	May 03/2021	0.02<MDL	µg/L	No
<b>Diazinon</b>	May 03/2021	0.02<MDL	µg/L	No
<b>Dicamba</b>	May 03/2021	0.20<MDL	µg/L	No
<b>1,2 Dichlorobenzene</b>	May 03/2021	0.41<MDL	µg/L	No
<b>1,4 Dichlorobenzene</b>	May 03/2021	0.36<MDL	µg/L	No
<b>1,2 Dichloroethane</b>	May 03/2021	0.35<MDL	µg/L	No
<b>1,1 Dichloroethylene</b>	May 03/2021	0.33<MDL	µg/L	No
<b>Dichloromethane</b>	May 03/2021	0.35<MDL	µg/L	No
<b>2,4 Dichlorophenol</b>	May 03/2021	0.15<MDL	µg/L	No
<b>2,4-D</b>	May 03/2021	0.19<MDL	µg/L	No

<b>Diclofop-Methyl</b>	May 03/2021	0.40<MDL	µg/L	No
<b>Dimethoate</b>	May 03/2021	0.06<MDL	µg/L	No
<b>Diquat</b>	May 03/2021	1<MDL	µg/L	No
<b>Diuron</b>	May 03/2021	0.03<MDL	µg/L	No
<b>Glyphosate</b>	May 03/2021	1<MDL	µg/L	No
<b>Malathion</b>	May 03/2021	0.02<MDL	µg/L	No
<b>MCPA</b>	May 03/2021	0.00012<MDL	µg/L	No
<b>Metolachor</b>	May 03/2021	0.01<MDL	µg/L	No
<b>Metribuzin</b>	May 03/2021	0.02<MDL	µg/L	No
<b>Monochlorobenzene</b>	May 03/2021	0.30<MDL	µg/L	No
<b>Paraquat</b>	May 03/2021	1<MDL	µg/L	No
<b>Pentachlorophenol</b>	May 03/2021	0.15<MDL	µg/L	No
<b>Phorate</b>	May 03/2021	0.01<MDL	µg/L	No
<b>Picloram</b>	May 03/2021	1<MDL	µg/L	No
<b>PCB</b>	May 03/2021	0.04<MDL	µg/L	No
<b>Prometryne</b>	May 03/2021	0.03<MDL	µg/L	No
<b>Simazine</b>	May 03/2021	0.01<MDL	µg/L	No
<b>THM</b> (NOTE: Annual average of 4 samples – Distribution system)	Feb 01/2021 - Nov 01/2021	74.75	µg/L	No
<b>HAA</b> (NOTE: Annual average of 4 samples – Distribution system)	Feb 01/2021 - Nov 01/2021	64.6	ug/L	No
<b>Terbufos</b>	May 03/2021	0.01<MDL	µg/L	No
<b>Tetrachloroethylene</b>	May 03/2021	0.35<MDL	µg/L	No
<b>2,3,4,6 - Tetrachlorophenol</b>	May 03/2021	0.20<MDL	µg/L	No
<b>Triallate</b>	May 03/2021	0.01<MDL	µg/L	No
<b>Trichloroethylene</b>	May 03/2021	0.44<MDL	µg/L	No
<b>2,4,6,- Trichlorophenol</b>	May 03/2021	0.25<MDL	µg/L	No
<b>Trifluralin</b>	May 03/2021	0.02<MDL	µg/L	No
<b>Vinyl Chloride</b>	May 03/2021	0.17<MDL	µg/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Sodium	24.7	mg/L	May 03, 2021
THM	74.75	ug/L	4 quarter average
HAA	64.6	ug/L	4 quarter average