# 2020 Year End Report: Port Severn Potable Water Plant

Drinking Water Works Permit: 143-202

Municipal Drinking Water License: 143-102

Ministry of Environment, Conservation and Parks Waterworks #: 220001669

Engineering and Public Works Department

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## Introduction

The Port Severn Potable Water Plant (PWP) serving the community of Port Severn is owned and operated by the District Municipality of Muskoka.

It constructed in 1997 and has an initial design capacity of 1,265 $m^3$ per day. The water system currently serves 227 customer service connections.

The plant operates under license 143-102and permit 143-202, issued in September 2020 under the Municipal Drinking Water Licensing Program. The plant also presently operates under MOECP permit to take water #2330-A4SPKK (expires December 31,2025), which permits the operation of up to 1,900 $m^3$ per day.

The Raw Water intake structure is located in the Severn River (Little Lake) approximately 4.5 meters deep and 250 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 two (2) self-contained Ecodyne Graver Monoplant water treatment units, consisting of a flocculation chamber, a tube settling chamber and an anthracite sand gravity filters. Also located at the treatment plant is one (1) contact chamber, two (2) clear wells, 5 (5) high lift pumps, chemical storage, preparation, and feed equipment.

The treatment plant system features chemical treatment consisting of Aluminum Sulfate (coagulation), sodium hydroxide (pH control) and disinfection in a chlorine contact chamber followed by final pH adjustment. The addition of hydrofluosilicic acid (fluoridation) to prevent tooth decay completes the treatment process.

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 that is issued by the MOECP 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 MOECP 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 Port Severn Potable Water Plant has a rated capacity of 1,265m$^3$ per day. In 2020, the total monthly average flow for the year was 190.4m$^3$ per day. The maximum day flow for the year was 647.5m$^3$ per day, however the 3-year average for maximum day flow is 521.8m$^3$ per day. This represents 41% 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 #2330-A4SPKK) permits 1,900 m$^3$ per day; therefore there were no exceedances of this permit.

## Summary of Analytical Results

A total of 676 microbiological regulatory tests were performed in 2020 and compliance with Provincial standards was achieved throughout the entire year.

There were 260 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 Port Severn PWP:

- Aluminum Sulfate: Coagulant
- Sodium Hypochlorite: Disinfection
- Sodium Hydroxide: pH Adjustment
- Hydrofluosilicic Acid - Fluoride

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

## Documentation of System Repairs and Upgrades

Port Severn PWP underwent life cycle change out including filter media, flow meters, actuators, valves, access hatches, facility roof, one analyzer and one level indicator.

## External Audits

### MOE Inspection

A MOE inspection was completed on Sept 16th, 2020 and is attached to this report. The overall rating was 100%.

### DWQMS Audit

In 2020 all drinking water systems within the District had an off-site external 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.

### Operational Challenge(s)

During the middle of summer (July 2020) manganese was observed in both the raw and treated water. The cause/source was attributed to the hot dry weather joint with no flow in the river (due to work on both dams) and a high demand on the treatment system.
Manganese entered the drinking water system at extraordinary levels which prompted the introduction of pre-chlorination in order to oxidize and filter the manganese prior to the chlorine contact tank and clear wells. Flushing of the distribution system was also carried out in order to remove discoloured water.
In the third week of July staff sightings of blue-green algae were reported in the source water near the shoreline/intake and reported to the Spills Action Centre (Incident Report #: 5412-BRQQYS).
On July 24, 2020 the MOECP instructed the shutdown of any pre-chlorination based on microcystin lab analysis/results. Continuous monitoring for both microcystin (external lab) and manganese (in-house) along with visual inspections of source water at the shoreline/intake were carried out until the first week of December. The installation of a D.O. probe at the low lift station to monitor for any anomalies and as an early indication of increased levels of manganese was mandated as well as an SOP regarding response to the presence of blue-green algae.

### Port Severn Water Distribution Summary 2020

#### New Services:

There were five (5) new water service installed in 2020.

#### Broken Watermains:

There were no broken water mains to report in 2020.

#### Service Leaks:

There was one (1) service leak to report in 2020.

#### Service Relocation:

There were two (2) service relocations to report in 2020.

#### Frozen Services:

No municipal water services were frozen in 2020.

#### Replacement Watermains:

No watermain replacement occurred in 2020.

#### New Watermains:

There were two (2) new watermain installs in 2020.

#### Valve Replacement:

There was one (1) 6” mainline gate valve replacement to service commercial property in 2020.

### Fire Hydrants:

There are 291 municipally assumed hydrants maintained by the District in West Muskoka. They were inspected, operated, and/or flushed at least once, pumped dry in the fall, and scoped during the winter months to ensure they are not susceptible to freezing.

### Meter Installations:

A total of six (6) water meters were replaced in Port Severn in 2020 as part of the aged meter change out program.

### Service Box Maintenance:

District field staff excavated and repaired two 14 curb stop boxes in 2020. Field staff also responded to four (4) water turn on/off requests in 2020.

### Air-Vacuum Release Valves:

Four (4) air release valves were inspected and tested for proper operation in 2020. Each of the chambers was inspected and pumped out as required.

### Locates:

Field staff addressed 203 written locate requests in 2020

*Table 1 Water Flow Summary - 2020*

| Month | Total Monthly ($m^3$) | Average Day Flow ($m^3/d$) | Maximum Day Flow ($m^3/d$) | Minimum Day Flow ($m^3/d$) |
|---|---|---|---|---|
| **January** | 3,790 | 122 | 137 | 111 |
| **February** | 3,722 | 128 | 142 | 117 |
| **March** | 4,002 | 129 | 152 | 114 |
| **April** | 4,768 | 159 | 266 | 103 |
| **May** | 5,683 | 183 | 274 | 139 |
| **June** | 8,696 | 290 | 442 | 174 |
| **July** | 11,846 | 382 | 647 | 244 |
| **August** | 8,388 | 271 | 325 | 207 |
| **September** | 6,842 | 228 | 337 | 165 |
| **October** | 6,061 | 196 | 257 | 120 |
| **November** | 3,253 | 108 | 204 | 0 |
| **December** | 2,624 | 85 | 151 | 69 |

Total Flow: 69,675m3
Average Day: 190.4m3
Maximum Day: 647.5m3
Minimum Day: 0.0m3

*Table 2 Raw Water Monthly Analysis Summary 2020 Part 1*

| Month | Alkalinity (mg/L) | Hardness (mg/L) | pH | Turbidity (ntu) | True Colour (tcu) | Temperature (Celsius) |
|---|---|---|---|---|---|---|
| **January** | 67.1 | 56.0 | 7.70 | 0.32 | 25 | 5.1 |
| **February** | 75.4 | 64.5 | 7.73 | 0.28 | 28 | 6.2 |
| **March** | 81.2 | 69.6 | 7.75 | 0.25 | 19 | 7.6 |
| **April** | 69.0 | 58.5 | 7.68 | 0.31 | 29 | 8.7 |
| **May** | 50.0 | 50.5 | 7.58 | 0.25 | 27 | 11.1 |
| **June** | 48.0 | 44.1 | 7.41 | 0.26 | 17 | 17.4 |
| **July** | 59.2 | 67.2 | 7.16 | 0.91 | 18 | 22.6 |
| **August** | 56.3 | 50.0 | 7.52 | 0.36 | 14 | 22.7 |
| **September** | 65.0 | 60.0 | 7.77 | 0.33 | 10 | 19.1 |
| **October** | 66.6 | 59.0 | 7.76 | 0.36 | 12 | 14.7 |
| **November** | 68.4 | 56.2 | 7.74 | 0.33 | 16 | 11.7 |
| **December** | 54.6 | 45.0 | 7.68 | 0.35 | 30 | 7.8 |
| **Average** | 63.4 | 56.7 | 7.62 | 0.36 | 20.4 | 12.9 |

*Table 3 Raw Water Monthly Analysis Summary 2020 Part 2*

| Month | Microcystin (ug/L) | TDS (mg/L) | Langliers Saturation Index | Total Coliforms (CFU/100mL) | E. Coli (CFU/100mL) | Total Number of Samples |
|---|---|---|---|---|---|---|
| **January** | Not Sampled | 119.5 | -1.1 | 7.0 | 0.25 | 4 |
| **February** | Not Sampled | 126.6 | -0.9 | 3.0 | 1.50 | 4 |
| **March** | Not Sampled | 110.6 | -0.9 | 1.0 | 0.00 | 5 |
| **April** | Not Sampled | 111.6 | -0.7 | 1.0 | 0.00 | 4 |
| **May** | <0.1 | 90.0 | -1.6 | 2.0 | 0.50 | 4 |
| **June** | <0.1 | 90.0 | -1.5 | 6.0 | 0.60 | 5 |
| **July** | 0.2 | 86.9 | -1.5 | 22.0 | 3.50 | 4 |
| **August** | <0.1 | 87.2 | -0.9 | 34.0 | 0.00 | 5 |
| **September** | <0.1 | 120.0 | -0.7 | 9.0 | 0.50 | 4 |
| **October** | <0.1 | 140.0 | -0.7 | 3.0 | 0.25 | 4 |
| **November** | <0.1 | 138.6 | -0.8 | 5.0 | 0.40 | 5 |
| **December** | Not Sampled | 102.6 | -1.2 | 5.0 | 0.00 | 4 |
| **Average** | 0.2 | 110.3 | -1.0 | 8.2 | 0.63 | 4 |

*Table 4 Chemical Usage Summary: Coagulant*

| Month | Average Dosage mg/L | Total kg |
|---|---|---|
| January | 42.7 | 457 |
| February | 43.6 | 470 |
| March | 44.8 | 504 |
| April | 44.9 | 344 |
| May | 44.6 | 348 |
| June | 44.4 | 478 |
| July | 48.0 | 681 |
| August | 48.4 | 478 |
| September | 45.5 | 364 |
| October | 43.4 | 404 |
| November | 37.2 | 193 |
| December | 38.4 | 168 |
| Average | 43.8 | 408 |

Total Yearly Kilograms: 4,891

*Table 5 Chemical Usage Summary: Sodium Hypochlorite*

| Month | Average Dosage mg/L | Total kg |
|---|---|---|
| January | 4.84 | 214.0 |
| February | 5.12 | 222.0 |
| March | 4.20 | 167.9 |
| April | 3.99 | 30.9 |
| May | 3.75 | 28.3 |
| June | 3.80 | 41.3 |
| July | 5.99 | 72.4 |
| August | 4.91 | 48.3 |
| September | 5.18 | 41.5 |
| October | 4.70 | 43.7 |
| November | 4.56 | 21.5 |
| December | 4.48 | 19.6 |
| Average | 4.60 | 39 |

Total Yearly Kilograms: 951

*Table 6 Chemical Usage Summary: Sodium Hydroxide*

| Month | Average Dosage mg/L | Total kg |
|---|---|---|
| January | 3.8 | 150 |
| February | 4.2 | 161 |
| March | 3.4 | 126 |
| April | 3.4 | 25 |
| May | 3.7 | 27 |
| June | 3.3 | 35 |
| July | 4.2 | 56 |
| August | 4.4 | 42 |
| September | 3.3 | 26 |
| October | 2.1 | 19 |
| November | 2.1 | 10 |
| December | 1.9 | 8 |
| Average | 3.3 | 57 |

Total Yearly Kilograms: 684

*Table 7 Chemical Usage Summary: Fluoride*

| Month | Average Dosage mg/L | Total kg |
|---|---|---|
| January | 0.48 | 11.6 |
| February | 0.60 | 14.3 |
| March | 0.54 | 12.6 |
| April | 0.58 | 4.3 |
| May | 0.61 | 4.2 |
| June | 0.53 | 1.5 |
| July | 0.00 | 0.0 |
| August | 0.00 | 0.0 |
| September | 0.00 | 0.0 |
| October | 0.00 | 0.0 |
| November | 0.70 | 0.5 |
| December | 0.46 | 1.9 |
| Average | 0.37 | 4 |

Total Yearly Kilograms: 51

Total Yearly Cost: $140

## Port Severn 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

Marcus Firman, C.E.T.
Director, Water and Wastewater Services

Stewart Hurd
Manager of Water and Wastewater Operations

# Drinking-Water Systems Regulation O. Reg. 170/03

## OPTIONAL ANNUAL REPORT TEMPLATE

| | |
|---|---|
| **Drinking-Water System Number:** | 260001669 |
| **Drinking-Water System Name:** | Lone Pine Water Treatment Plant – Port Severn |
| **Drinking-Water System Owner:** | District Municipality of Muskoka |
| **Drinking-Water System Category:** | Large Municipal Residential |
| **Period being reported:** | January 01 to December 31, 2020 |

***Complete if your Category is Large Municipal Residential or Small Municipal Residential***

**Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ X ]**

**Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X ] No [ ]**

**Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.**

**District Municipality of Muskoka**
**70 Pine Street**
**Bracebridge, Ontario**
**P1L 1N3**
**(705) 645-6764**
www.muskoka.on.ca

***Complete for all other Categories.***

**Number of Designated Facilities served:**

N.A.

**Did you provide a copy of your annual report to all Designated Facilities you serve?**
**Yes [ ] No [ ]**

**Number of Interested Authorities you report to:** N.A.

**Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?**
**Yes [ ] No [ ]**

**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.**

**[ X ] Public access/notice via the web**
**[ X ] Public access/notice via Government Office**
**[ X ] Public access/notice via a newspaper**
**[ X ] 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 Port Severn was constructed in 1997. The treatment process consists of chemically assisted coagulation-flocculation, sedimentation and filtration using dual-media filters with a combination of sand and anthracite coal. Disinfection in a post-treatment chlorine contact chamber is followed by fluoridation and final pH adjustment before the treated water is pumped to our customers. Our waterworks currently serves a population of approximately 500 persons. The rated water production capacity of the plant is 1900 cubic meters per day. Our raw water source is Little Lake and the intake is located two meters above the lakebed at a depth of 4.5 meters and about 255 meters from shore.

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

Sodium Hypochlorite, Aluminum Sulphate, Sodium Hydroxide, Fluoride.

**Were any significant expenses incurred to?**

**[ x ]** Install required equipment
**[ x ]** Repair required equipment
**[ x ]** Replace required equipment

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

Port Severn PWP/WWTP underwent combined capital upgrades including change out of filter media, flow meters, actuators, valves, access hatches, facility roof, one analyzer and one level indicator at the PWP alone. Total cost incurred for the upgrades were approx. $542,530.35.

**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 |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

**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 - 14 | 0 – 52 | 0 | N.A. |
| **Treated** | 52 | 0 - 0 | 0 - 0 | 52 | 0 - 0 |
| **Distribution** | 156 | 0 - 0 | 0 - 0 | 104 | 0 - 2 |

**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 - 0.13 NTU | 0.02 NTU |
| **Chlorine** | 8760 | 1.25 – 2.13 mg/l | 1.43 mg/l |
| **Fluoride** (If the DWS provides fluoridation) | 8760 | 0.03 - 0.81 mg/l | 0.59 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 11/2020 | 0.09 | µg/L | No |
| **Arsenic** | May 11/2020 | 0.3 | µg/L | No |
| **Barium** | May 11/2020 | 18.2 | µg/L | No |
| **Boron** | May 11/2020 | 10 | µg/L | No |
| **Cadmium** | May 11/2020 | 0.003 | µg/L | No |
| **Chromium** | May 11/2020 | 0.16 | µg/L | No |
| ***Lead** | May 11/2020 | | µg/L | No |
| **Mercury** | May 11/2020 | 0.01 | µg/L | No |
| **Selenium** | May 11/2020 | 0.04 | µg/L | No |
| **Sodium** | May 11/2020 | 17.3 | mg/L | **Yes** |

| | | | | |
|---|---|---|---|---|
| **Uranium** | May 11/2020 | 0.005 | µg/L | No |
| **Fluoride** | May 11/2020 | 0.59 | mg/L | No |
| **Nitrite** | Feb 10/2020 | 0.003 | mg/L | No |
| **Nitrate** | Feb 10/2020 | 0.083 | mg/L | No |
| **Nitrite** | May 11/2020 | 0.003 | mg/L | No |
| **Nitrate** | May 11/2020 | 0.092 | mg/L | No |
| **Nitrite** | Aug 10/2020 | 0.003 | mg/L | No |
| **Nitrate** | Aug 10/2020 | 0.108 | mg/L | No |
| **Nitrite** | Nov 09/2020 | 0.003 | mg/L | No |
| **Nitrate** | Nov 09/2020 | 0.056 | 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 |
|---|---|---|---|---|---|
| **Plumbing** | 0 | N.A. | N.A. | µg/L | N.A. |
| **Distribution** | 4 | 0.02 – 0.39 | 0.16 | 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 |
|---|---|---|---|---|
| **Alachlor** | May 11/2020 | 0.02 | µg/L | No |
| **Atrazine+N-dealkylated Metabolites** | May 11/2020 | 0.01 | µg/L | No |
| **Azinphos-methyl** | May 11/2020 | 0.05 | µg/L | No |
| **Benzene** | May 11/2020 | 0.32 | µg/L | No |
| **Benzo(a)pyrene** | May 11/2020 | 0.004 | µg/L | No |
| **Bromoxynil** | May 11/2020 | 0.33 | µg/L | No |
| **Carbaryl** | May 11/2020 | 0.05 | µg/L | No |
| **Carbofuran** | May 11/2020 | 0.01 | µg/L | No |
| **Carbon Tetrachloride** | May 11/2020 | 0.17 | µg/L | No |
| **Chorpyrifos** | May 11/2020 | 0.02 | µg/L | No |
| **Diazinon** | May 11/2020 | 0.02 | µg/L | No |
| **Dicamba** | May 11/2020 | 0.2 | µg/L | No |
| **1,2 Dichlorobenzene** | May 11/2020 | 0.41 | µg/L | No |
| **1,4 Dichlorobenzene** | May 11/2020 | 0.36 | µg/L | No |
| **1,2 Dichloroethane** | May 11/2020 | 0.35 | µg/L | No |
| **1,1 Dichloroethylene** | May 11/2020 | 0.33 | µg/L | No |

| | | | | |
|---|---|---|---|---|
| **Dichloromethane** | May 11/2020 | 0.35 | µg/L | No |
| **2,4 Dichlorophenol** | May 11/2020 | 0.15 | µg/L | No |
| **2,4-D** | May 11/2020 | 0.19 | µg/L | No |
| **Diclofop-Methyl** | May 11/2020 | 0.4 | µg/L | No |
| **Dimethoate** | May 11/2020 | 0.06 | µg/L | No |
| **Diquat** | May 11/2020 | 1 | µg/L | No |
| **Diuron** | May 11/2020 | 0.03 | µg/L | No |
| **Glyphosate** | May 11/2020 | 1 | µg/L | No |
| **Malathion** | May 11/2020 | 0.02 | µg/L | No |
| **MCPA** | May 11/2020 | 0.00012 | µg/L | No |
| **Metolachor** | May 11/2020 | 0.01 | µg/L | No |
| **Metribuzin** | May 11/2020 | 0.02 | µg/L | No |
| **Monochlorobenzene** | May 11/2020 | 0.3 | µg/L | No |
| **Paraquat** | May 11/2020 | 1 | µg/L | No |
| **Pentachlorophenol** | May 11/2020 | 0.15 | µg/L | No |
| **Phorate** | May 11/2020 | 0.01 | µg/L | No |
| **Picloram** | May 11/2020 | 1 | µg/L | No |
| **PCB** | May 11/2020 | 0.04 | µg/L | No |
| **Prometryne** | May 11/2020 | 0.03 | µg/L | No |
| **Simazine** | May 11/2020 | 0.01 | µg/L | No |
| **THM** (NOTE: Annual average of 4 samples – Distribution system) | Feb 10/2020 - Nov 09/2020 | 60.75 | µg/L | No |
| **Terbufos** | May 11/2020 | 0.01 | µg/L | No |
| **Tetrachloroethylene** | May 11/2020 | 0.35 | µg/L | No |
| **2,3,4,6 - Tetrachlorophenol** | May 11/2020 | 0.2 | µg/L | No |
| **Triallate** | May 11/2020 | 0.01 | µg/L | No |
| **Trichloroethylene** | May 11/2020 | 0.44 | µg/L | No |
| **2,4,6,- Trichlorophenol** | May 11/2020 | 0.25 | µg/L | No |
| **Trifluralin** | May 11/2020 | 0.02 | µg/L | No |
| **Vinyl Chloride** | May 11/2020 | 0.17 | µg/L | No |
| **HAA5** (NOTE: Annual average of 4 samples – Distribution system) | Feb 10/2020- Nov 09/2020 | 61.6 | 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 |
|---|---|---|---|
| HAA's | 61.6 | ug/L | Running Avg 4 quarters |
| THM's | 60.75 | ug/L | Running Avg 4 quarters |
| N.A. | | | |