# WAWA DRINKING WATER SYSTEM

Annual and Summary Report 2024

**Prepared by:**
Water & Sewer Department
Infrastructure Services

February 2025

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**Prepared by:** Municipality of Wawa
Infrastructure Services
Water & Sewer Department

Feb 19/2025
Date

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FEB 19, 2025
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Date

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# 1.0 Introduction

## 1.1 Requirements of the Summary Report

The 2024 Annual and Summary Report for the Municipality of Wawa Drinking Water System (DWS) are being submitted to satisfy both Section 11 and Schedule 22 of the Ontario Regulation 170/03. The requirements of the regulation for each report have been consolidated into a single document. This report is intended to brief the owner and the consumers of the Wawa Drinking Water System on the system's performance over the past calendar year January 1, to December 31, 2024.

This report encompasses all elements as required by O. Reg. 170/03. Each section explains what is required for the category Large Municipal Residential DWS (as it pertains to the Wawa DWS), how limits were met and if shortfalls were revealed.

## 1.2 Background

The Wawa water supply system serves the Community of Wawa– sometimes referred to as the Wawa townsite and the Michipicoten River Village– which are located within the Municipality of Wawa, District of Algoma. The facility is owned, maintained, and operated by The Corporation of the Municipality of Wawa and serves approximately 3,000 people. There are no major industrial users in the community.

The Wawa Water Treatment Plant (WTP) is located at 40C Broadway Avenue, at the north-east corner of Ganley Street and McKinley Avenue. The plant was constructed in accordance with Certificate of Approval 7008-648JTL issued by the Ministry of the Environment, Conservation and Parks (MECP) and remedied the deficiencies of the original plant. The WTP includes a low lift pumping station, membrane filtration system, disinfection utilizing sodium hypochlorite, fluoridation using hydrofluosilicic acid, chlorine contact cells, treated water storage, high lift pumping and a standby generator. The WTP has a rated capacity of 7,880 $m^3$/day.

## 1.3 Facility Specifics

- The Wawa Water Treatment Plant is a Class II Plant. This type of facility requires the Overall Responsible Operator (ORO) to have a Class II Operator License. The Water and Wastewater Lead Hand possess a Class II Water Treatment License and a Class II Water Distribution License.
- Maximum rate of Raw Water Taking: 25,000 $m^3$/day
- Waterworks Number: 210000050

## 1.4 Format

**Chapter 2** of this report deals with the performance of the system and compliance with the requirements of the Act, Regulations, the system's approval, drinking water works permit, municipal drinking water license and any orders applicable to the system that were not met at any time during the period covered by the report.

**Chapter 3** presents conclusions of the performance of the system.

# 2.0 System Requirements

## 2.1 The Act and Regulations

### 2.1.1 General

The system was compliant with the Act and Regulations during 2023.

### 2.1.2 Municipal Drinking Water Licence

MUNICIPAL DRINKING WATER LICENCE (2), Licence Number: 231-101 (Issue 4), Issued August 12, 2021.

Licence Expiry Date is June 2, 2026, with an application for licence renewal date of December 3, 2025.

### 2.1.3 Drinking Water Works Permit

DRINKING WATER WORKS PERMIT (2), Permit Number: 231-201, Issued August 12, 2021.

### 2.1.4 Permit to take Water

The new Permit to Take Water (PTTW) # 8801-A3ZKAL, which renews, and replaces PTTW #1086-88UQXZ, was issued to The Corporation of the Municipality of Wawa on November 24, 2015.

The Permit to take Water expires on December 1, 2025.

### 2.1.5 MECP Inspection Report

The Ministry of Environment, Conservation and Parks (MECP) inspection report outlines the design, operating requirements, and observations of the inspector, and includes recommendations and orders where required. Additional items are identified as best practices and serve as a guide to the Municipality and its Operators.

The MECP completed their 2023/2024 inspection of the Wawa Drinking Water System on September 29, 2022, and completed the inspection on March 26, 2024 (Event No. 1-207775752). This inspection, completed by Ministry Inspector Kristy Mitchell is conducted annually (or more often as required) and can be either announced, in which the operators have advance notification of the inspection, or unannounced, wherein no notice is given. This report was submitted to the Municipality of Wawa on April 15, 2024. The inspection report which follows a structured format, outlines the design, operating requirements and observations of the inspector, along with recommendations and orders where required. Additional items are identified as "Best Practices "and serve as a guidance to the Municipality and operators. Also with the inspection there is inspection summary rating record. The report and inspection rating is attached as Appendix D

There were no non-compliance or additional actions identified in the 2023/2024 inspection report.

### 2.1.6 Drinking Water Quality Management Standard (DWQMS)

The Drinking Water Quality Management Standard (DWQMS) is a made in Ontario management standard developed specially by the drinking water sector for municipal residential drinking water systems. It is also a tool for Owners and Operators of a drinking

system to help ensure that consistent processes and procedures are in place to manage production and delivery of high-quality drinking water.

The development and implementation of the Municipal Drinking Water Licensing Program is based on Justice O'Connor's recommendations in the Walkerton Inquiry Report. A municipal drinking water license is an approval that is issued by the Ministry of the Environment to owners under the Safe Drinking Water Act, 2002 (SDWA) for the operation of municipal residential drinking water systems.

The Municipality of Wawa DWS received their Certificate of Accreditation for a Full Scope Drinking Water Quality Management Standard (DWQMS) renewal on December 12, 2022. The Certificate of Accreditation is attached as Appendix C.

## 2.2 Operational Checks, Sampling and Testing

### 2.2.1 Continuous Monitoring Equipment

In accordance with the Drinking Water Works Permit (Issue 4), the Wawa WTP is equipped with continuous monitoring equipment to sample and test for free chlorine residual, turbidity and fluoride concentration in the water leaving the plant. These parameters and others—such as pH—are measured at critical points in the treatment sequence to assist with operational decision making. The data is transmitted to and archived in a designated SCADA system computer in the main control room. The SCADA system analyzes and archives the data to generate daily, monthly and annual reports. Operational set points are programmed into the SCADA system which triggers an auto-dialer if an alarm condition occurs. The auto-dialer notifies Operational Personnel of any potential problems.

### 2.2.2 Free Chlorine Residual

Free chlorine residual is monitored continuously and recorded every second going into the chlorine contact chambers. This is consistent with the requirements in Schedule 7 of Regulation 170/03 that indicated that "…sampling and testing for free chlorine residual is carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry Procedure for Disinfection of Drinking Water in Ontario."

Chlorine residual readings of the water entering the clear wells for the year was averaged at 0.98 mg/L and for water being pumped to the distribution system was averaged at 0.85 mg/L. Refer to Table 1 for the minimum and maximum.

### 2.2.3 Turbidity

At the Wawa Water Treatment Plant, turbidity is continuously monitored in the effluent from each of the three membrane filter skids and recorded every second, consistent with Regulation 170/03. From January 1 to December 31, 2023 the average turbidity from all three skids was 0.03 NTU.

The Ministry Procedure for Disinfection of Drinking Water in Ontario further requires that filtered water turbidity from membrane filtration processes be less than or equal to 0.10 NTU in 95% of the measurements each month in order to claim 2.0 + log cryptosporidium removal credit. Information from the operations at the plant indicates that this condition was met.

The turbidity for the water being pumped to distribution is also monitored and recorded every second. From January 1 to December 31, 2024, the average was 0.06 NTU. Refer to Table 1 below for the minimum and maximum.

### 2.2.4 Fluoride

At the Wawa Water Treatment Plant, fluoride is continuously monitored in the discharge from the high lift pumps and recorded at one second intervals. The average of the concentration recorded for the period of January 1 to December 31, 2024 was 0.72 mg/L. Regulation 170/03 (Schedule 7, sub.7.4) only requires fluoride testing once every day.

As per Ontario regulation 169/03 for Ontario Drinking Water Quality Standards the Maximum Allowable Concentration for fluoride is 1.5 mg/L for systems that provide fluoridation and if you have an exceedance of the Maximum Allowable Concentration, it is to be treated as an indicator of adverse water quality and must be reported to the proper authorities. There were no fluoride adverse incidents. Refer to Table 1 below for the minimum and maximum.

**Table 1: Annual Summary of Operational Checks for 2023**

| Parameter | Number of Samples | Minimum | Average | Maximum |
|---|---|---|---|---|
| Free Chlorine Residual Entering CT Chamber (mg/L) | Online Analyzer (sample every second) | 0.52 | 0.98 | 5.00 |
| Free Chlorine Residual Pumped to the Distribution System (mg/L) | Online Analyzer (sample every second) | 0.36 | 0.72 | %.00 |
| Turbidity Effluent from Each of the Three Membrane Filter Skids (NTU) | Online Analyzer (sample every second) | 0.03 | 0.03 | 0.03 |
| Fluoride Residual Pumped to the Distribution System (mg/L) | Online Analyzer (sample every second) | 0.58 | 0.72 | 2.00 |
| Distribution System Turbidity (NTU) | Online Analyzer (sample every second) | 0.02 | 0.06 | 0.34 |

**Note**: The minimum and maximum residuals do not show true; there are the "spikes" in the readings that are caused by routine maintenance on analyzers (turning power off and back on). After maintenance, Operations Staff complete grab samples to calibrate the unit. This method has been discussed with and accepted by the Ministry of the Environment, Conservation and Parks.

### 2.2.5 Microbiological Sampling and Testing

The Regulation requires that:

1. In the distribution system, a minimum of twelve samples must be taken monthly and tested for:
    - E-Coli;
    - Total Coliforms; and
    - HPC (25% of the samples tested for this).

At least one of these samples must be taken every week.

2. Treated water samples at the Wawa WTP are to be taken at least once every week and tested for:
    - E-Coli or Fecal Coliform;
    - Total Coliforms; and
    - HPC.

3. Raw water samples at the WTP are to be taken at least once every week and tested for:
    - E-Coli; and,
    - Total Coliform.

Testing has conformed to the requirements of Regulation 170/03.

### 2.2.6 Chemical Testing

In accordance with Ontario Regulation 170/03, Schedule 13 – Chemical Sampling and Testing, for Large Municipal Residential System with surface water supply, the following testing is to be performed annually:

- Schedule 23 – Inorganic parameters;
- Schedule 24 – Organic parameters; and
- Lead – new mandatory testing since December 2007 – of testing for lead in the distribution system and into household plumbing. Refer to Table 2 on the for results from the 2023 lead sampling in the Municipality.

**Table 2: Summary of Annual Lead Testing under Schedule 15.1**

| | Number of Samples | Range of Lead Results (min # - max #) | Number of Exceedances |
|---|---|---|---|
| **Plumbing** | N/A | N/A | N/A |
| **Distribution** | 4 | <1.0 - 1.5 | 0 |

**Note:** As per the Amended Reg.170/03 (Drinking Water System) made under the Safe Drinking Water Act, 2002, the Community Lead Testing Program (Schedule 15.1) The Municipality of Wawa is now exempt from plumbing sampling for lead. As per Drinking Water System Regulation 170/03, made under the Safe Drinking water Act 2002, schedule 15.1-4 subsection 10.

In accordance with Ontario Regulation 170/03, Schedule 13 – Chemical Sampling and Testing, for Large Municipal Residential System with surface water supply, the following testing is to be performed quarterly:

- THM;
- HAA; and
- Nitrates and Nitrites.

In accordance with Ontario Regulation 170/03, Schedule 13 – Chemical Sampling and Testing, for Large Municipal Residential System with surface water supply, the following testing is to be performed every 60 months:

- Sodium

A review of the Municipality's records confirmed that all testing was performed as required during this reporting period. There was one incident of low pressure in the distribution system as a result of a power failure to the WTP's PLC. A BWA was not issued and subsequent distribution system sampling indicated that the drinking water distribution system was not adversely affected by the drop in pressure.

In 2014, the annual average for THMs in the Municipality's drinking water was 112.9 µg/L, exceeding the current allowable concentration of 100 µg/L. This does not pose any short-term or acute health risk. However, the Algoma Public Health Unit issued a drinking water advisory (DWA) for the whole Municipality on November 26, 2014. As a result of the efforts taken by the Municipality to reduce the THM concentration, the DWA from The Algoma Public Health Unit was lifted on June 10, 2020. The average THM concentration in 2024 was 41.6 µg/L.

THMs are formed as a by-product predominantly when chlorine is used to disinfect water for drinking. They represent one group of chemicals generally referred to as disinfection by-products. They result from the reaction of chlorine or bromine with organic matter present in the water being treated.

In addition, the Ontario Drinking Water Standard for Haloacetic Acids (HAAs) came into effect January 1, 2020, the standard is 80.0 µg/L. The Municipality's average for 2024 was 43.1 µg/L.

Furthermore, the Municipality began a monitoring testing plan in August 2019 as per the June 2019 inspection report's summary recommendations and best management practices. In 2024, the Municipality sampled seasonally (July to October) raw and treated water, with the average Microcystin (Blue /Green Algae) at a level of <0.1 µg/L, well below the maximum acceptable concentration of 1.5 µg/L.

The Municipality of Wawa was also selected by the MECP to participate in a Drinking Water Surveillance Program (DWSP). This program is voluntary and no cost to the Municipality. Samples are routinely taken and sent to the MECP lab in Etobicoke, Ontario for analysis. The Operators consider this program to be another beneficial resource for monitoring water quality for the Municipality.

# 3.0 System Performance

The Wawa WTP flows are monitored continuously in the raw water intake and discharge to the distribution system, and are recorded on the SCADA system. Daily reports are generated that indicate the minimum, average, maximum and total monthly, and yearly flow. Table 3 illustrates the monthly maximum raw water and finished water flows, and Table 4 summarizes the plants annual flows and water consumption for 2024.

**Table 3: Maximum Raw Water and Finished Water Flows**

| Month | Maximum Raw Water Taking Flow ($m^3/d$) | Maximum Finished Water to Distribution System Flow ($m^3/d$) |
|---|---|---|
| January | 3,366.70 | 2,875.00 |
| February | 3,713.80 | 2,943.60 |
| March | 3,547.00 | 2,902.80 |
| April | 3,056.60 | 2,800.20 |
| May | 2,585.10 | 2,439.20 |
| June | 2,501.10 | 2,070.30 |
| July | 2,772.30 | 2,084.50 |
| August | 2,382.80 | 2,235.80 |
| September | 2,602.20 | 1,925.10 |
| October | 2,334.50 | 1,872.40 |
| November | 2,345.90 | 2,054.30 |
| December | 3,063.70 | 2,753.00 |
| **Maximum Allowable Daily Volume** | 25,000.00 | 7,880.00 |
| **Highest % of Maximum Volume** | 15% | 37% |

### Table 4: Summary of Annual Flows and Water Consumption

| Month | Total Consumption ($m^3$) | Average Daily Flow ($m^3/d$) | Maximum Daily Flow ($m^3/d$) | Instantaneous Peak Flow (L/s) | Wawa Monthly Consumption ($m^3$) | Net MRV Monthly Consumption ($m^3$) |
|---|---|---|---|---|---|---|
| January | 76,910.00 | 2,480.90 | 2,875.80 | 61.20 | 74,931.00 | 1,979.00 |
| February | 78,838.70 | 2,718.60 | 2,943.60 | 52.50 | 76,675.70 | 2,163.00 |
| March | 75,607.30 | 2,438.90 | 2,902.80 | 60.40 | 73,182.30 | 2,425.00 |
| April | 77,716.10 | 2,590.50 | 2,800.2 | 58.20 | 75,720.10 | 1,996.00 |
| May | 58,321.20 | 1,881.30 | 2,439.20 | 53.10 | 56,542.20 | 1,779.00 |
| June | 46,610.80 | 1,553.69 | 2,070.30 | 52.70 | 44,291.80 | 2.319.00 |
| July | 57,562.80 | 1,918.76 | 2,084.50 | 45.50 | 55,498.80 | 2,064.00 |
| August | 55,391.30 | 1,786.30 | 2,235.80 | 79.00 | 53,242.30 | 2,149.00 |
| September | 50,760.10 | 1,692.00 | 1,925.10 | 86.60 | 48,853.10 | 1,907.00 |
| October | 49,866.40 | 1,608.50 | 1,872.40 | 81.80 | 48,308.40 | 1,558.00 |
| November | 52,393.20 | 1,746.20 | 2,054.300 | 57.20 | 50,647.20 | 1,719.00 |
| December | 64,349.40 | 2,075.80 | 2,753.00 | 159.00 | 62,464.40 | 1,885.00 |
| **Annual Totals** | **Total Consumption ($m^3$)** | **Average Daily Flow ($m^3/d$)** | **Maximum Daily Flow ($m^3/d$)** | **Maximum Peak Flow ($m^3/d$)** | **Wawa Total Consumption ($m^3$)** | **MRV Total Consumption ($m^3$)** |
| | **744,327.30** | **2,040.95** | **2,943.60** | **159.00** | **720,384.30** | **23943.00** |

The Wawa Water Treatment Plant has an approved, rated treatment capacity of 7,880 $m^3$/day which includes an allowance of 392 $m^3$/day to serve Michipicoten River Village. The maximum day flow in 2024 was 2,943.60 $m^3$/day, which is approximately 37.3% of the WTP total rated capacity. The maximum recorded instantaneous flow rate was 159 L/s that occurred during the month of December.

# Appendix A

## Definition of Terms

| | |
|---|---|
| **AWQI** | Adverse water quality incident |
| **CT value** | Product of disinfectant concentration and contact time (mg-min/L) |
| **DWS** | Drinking water system |
| **EC** | E. Coli |
| **HAA** | Haloacetic acids |
| **HPC** | Heterotrophic plate count |
| **MAC** | Maximum Acceptable Concentration |
| **MECP** | Ministry of the Environment, Conservation and Parks |
| **$m^3$** | Cubic metres |
| **$m^3/d$** | Cubic metres per day |
| **mg/L** | Milligram per litre (part per million) |
| **ML** | Megalitre (1000 m3) |
| **NTU** | Nephelometric turbidity unit |
| **ODWS** | Ontario Drinking Water Standards |
| **O. Reg. 170/03** | Ontario Regulation 170/03 |
| **PLC** | Programmable logic controller |
| **PTTW** | Permit to take water |
| **SCADA** | Supervisory control and data acquisition |
| **TC** | Total coliforms |
| **THM** | Trihalomethane |
| **µg/L** | Microgram per litre (part per billion) |
| **WD** | Water distribution |
| **WT** | Water treatment |

# Appendix B

## WAWA DRINKING WATER SYSTEM

Waterworks No. 210000050

**Annual Report**

**2024**

Ontario **Drinking-Water Systems Regulation O. Reg. 170/03**

# *WAWA WATER SYSTEM 2023 ANNUAL REPORT*

| | |
|---|---|
| **Drinking-Water System Number:** | **210000050** |
| **Drinking-Water System Name:** | Wawa Water Supply System |
| **Drinking-Water System Owner:** | The Corporation of the Municipality of Wawa |
| **Drinking-Water System Category:** | Municipal Residential – Large |
| **Period being reported:** | 01-01-24 to 31-12-24 |

***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.**

Municipal Office

40 Broadway Avenue

Wawa, Ontario

P0S 1K0

***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 [ X ]**

**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 [ X ]**

**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 |
|---|---|
| - - - NONE - - - | |

**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 [ X ]**

**Indicate how you notified system users that your annual report is available, and is free of charge.**
**[ X ] Public access/notice via the web**
**[ ] Public access/notice via Government Office**
**[ ] 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**

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## Describe your Drinking-Water System

Water Treatment Plant consisting of a membrane filtration process with the intake from Wawa Lake. Raw water is pumped through the membrane filters then chlorinated before going to an under-floor reservoir. Sodium hypochlorite is used for pre-chlorination, primary and secondary disinfection, and membrane cleaning. Hydrofluorosilicic acid is added to filtered water before entering the under-floor reservoir. (In 2020, the addition of aluminum sulphate to the raw water was initiated on July 15, 2020, to reduce THMs (Trihalomethanes) in the drinking water. Aluminum sulphate (Alum) is used as a coagulant to reduce organic matter in the water. With alum added, organic matter combines to form particles large enough to be removed from the water during filtration and before sodium hypochlorite addition (chlorine). With reduced levels of organic matter in the water, less chlorine is required and in-turn, less THMs and other disinfection by-products (like haloacetic acids, HAAs) are formed. Water quality analysis results from samples collected in the water treatment plant and in the water distribution system confirmed a reduction in THMs, HAAs and chlorine demand. The need to use alum is anticipated to be on a seasonal basis, when levels of naturally occurring organic matter is greatest. Alum addition ceased in November and the water quality analysis results will be reviewed to help confirm appropriate start and stop dates for 2023.

Residue from the filter backwash and acid cleaning can be discharged to the municipal sanitary sewer system or to the storm sewer system. Continuous analyzers are in place for turbidity, chlorine residual and fluoride monitoring. Flow meters are used to monitor raw water flow into each filter train and treated and chlorinated water entering the under-floor reservoir.

A transmission main connects the Wawa water distribution system to the elevated water storage tank at the Michipicoten River Village, where a “touch-up” chlorination facility using sodium hypochlorite is installed.

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

- Sodium hypochlorite
- Hydrofluorosilicic acid
- Aluminum Sulphate (seasonally)

**Were any significant expenses incurred to?**
**[ X ]** Install required equipment
**[ ]** Repair required equipment
**[ X ]** Replace required equipment
[ **X** ] Maintenance

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

- Roof top AC compressor $20,798.57
- 2 Continuous Turbidity meters 13,384.00
- 2 Chlorine Diaphragm pumps $3,340.00
- MRV Tower upgrades 91,348.00 + HST
- 3 HDPE Filter Tank Replacement: $29,695.35
- Davidsons Valves/Backflow/pressure regulators MRV tower
- $6108.96
- Skid B 30 Filter Module Replacement: $203,526.93

**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* |
|---|---|---|---|---|---|
| | | | | | |
| **September 21, 2024** | **Lost power to Water treatment plant** | **Pressure in system dropped** | **N/A** | **WTP returned to being online, bacterial testing identified that the system was not impacted by the drop in pressure** | **September 11, 2023** |

**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 | <1 - 4 | <1 - 156 | N-A | N-A |
| **Treated** | 51 | Absent | Absent | 51 | <1 - 2 |
| **Distribution** | 203 | Absent | Absent | 51 | 0 - 4 |

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

***Water Treatment Plant***

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

| | Number of Grab Samples | Minimum | Average | Maximum |
|---|---|---|---|---|
| **Turbidity (NTU)** | 8,760 | 0.024 | 0.060 | 0.340 |
| **Chlorine (mg/l)** | 8,760 | 0.360 | 0.850 | 5.000 |
| **Fluoride (mg/l)** | 8,760 | 0.580 | 0.720 | 1.880 |

Note: Minimum and Maximum levels are caused by instrument spikes due to maintenance to the instruments.

***Distribution System***

| | Number of Samples | Minimum | Average | Maximum |
|---|---|---|---|---|
| **Chlorine Residual (mg/l)** | 365 | 0.35 | 0.79 | 1.19 |

## 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 |
|---|---|---|---|---|
| **Certificate of Approval 7805-76ZKUC** | Waste Water Suspended Solids | N/A | None | No Discharge |
| **Certificate of Approval 7805-76ZKUC** | Waste Water Chlorine Residual | N/A | None | No Discharge |

## 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 | 21-May-24 | <0.60 | µg/L | No |
| Arsenic | 21-May-24 | 1.0 | µg/L | No |
| Barium | 21-May-24 | <10 | µg/L | No |
| Boron | 21-May-24 | <50 | µg/L | No |
| Cadmium | 21-May-24 | <0.10 | µg/L | No |
| Chromium | 21-May-24 | <1.0 | µg/L | No |
| Fluoride | 21-May-24 | 0.152 | mg/L | No |
| *Lead | | | | |
| Mercury | 03-June-24 | <0.100 | µg/L | No |
| Nitrate | 22-Jan-24 | 0.052 | µg/L | No |
| Nitrite | 22-Jan-24 | <0.010 | µg/L | No |
| Selenium | 21-May-24 | <1.0 | µg/L | No |
| Sodium | 21-May-24 | 7.69 | mg/L | No |
| Uranium | 21-May-24 | <2.0 | µg/L | No |

Note: 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)

Note: The Municipality of Wawa is now exempt from plumbing sampling for lead. As per Drinking water System Regulation 170/03, made under the Safe Drinking water Act 2002, schedule 15.1-4 subsection 10.

| Location Type | Number of Samples | Range of Lead Results (min#) – (max #) | Number of Exceedances |
|---|---|---|---|
| **Plumbing** | N/A | N/A | N/A |
| **Distribution** | 4 | <1.0 - 1.5 | 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 | 21-May-24 | <0.05 | µg/L | No |
| Aldicarb | | | | |
| Aldrin + Deildrin | | | | |
| Atrazine + N-dealkylated metobolites | 21-May-24 | <0.14 | µg/L | No |
| Azinphos-methyl | | | | |
| Bendiocarb | | | | |
| Benzene | 21-May-24 | <0.50 | µg/L | No |
| Benzo(a)pyrene | 21-May-24 | <0.0050 | µg/L | No |
| Bromoxynil | 21-May-24 | <0.200 | µg/L | No |
| Carbaryl | 21-May-24 | <0.50 | µg/L | No |
| Carbofuran | 21-May-24 | <0.025 | µg/L | No |
| Carbon Tetrachloride | 21-May-24 | <0.20 | µg/L | No |
| Chlordane (Total) | | | | |
| Chlorpyrifos | 21-May-24 | <0.10 | µg/L | No |
| Cyanazine | | | | |
| Diazinon | 21-May-24 | <0.025 | µg/L | No |
| Dicamba | 21-May-24 | <0.10 | µg/L | No |
| 1,2-Dichlorobenzene | 21-May-24 | <0.50 | µg/L | No |
| 1,4-Dichlorobenzene | 21-May-24 | <0.50 | µg/L | No |
| Dichlorodiphenyltrichloroethane (DDT) + metabolites | | | | |
| 1,2-Dichloroethane | 21-May-24 | <0.50 | µg/L | No |

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|---|---|---|---|---|
| 1,1-Dichloroethylene (Vinylidene Chloride) | 21-May-24 | <0.50 | µg/L | No |
| Dichloromethane | 21-May-24 | <1.0 | µg/L | No |
| 2-4 Dichlorophenol | 21-May-24 | <0.30 | µg/L | No |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) | 21-May-24 | <0.050 | µg/L | No |
| Diclofop-methyl | 21-May-24 | <0.10 | µg/L | No |
| Dimethoate | 21-May-24 | <0.10 | µg/L | No |
| Dinoseb | | | | |
| Diquat | 21-May-24 | <1.0 | µg/L | No |
| Diuron | 21-May-24 | <0.050 | µg/L | No |
| Glyphosate | 21-May-24 | <1.00 | µg/L | No |
| Haptachlor + Heptachlor Epoxide | | | | |
| Lindane (Total) | | | | |
| Malathion | 21-May-24 | <0.025 | µg/L | No |
| Methoxychlor | | | | |
| Metolachlor | 21-May-24 | <0.10 | µg/L | No |
| Metribuzin | 14-Dec-23 | <0.10 | µg/L | No |
| Monochlorobenzene | | | | |
| Paraquat | 14-Dec-23 | <0.025 | µg/L | No |
| Parathion | | | | |
| Pentachlorophenol | 21-May-24 | <0.50 | µg/L | No |
| Phorate | 21-May-24 | <0.25 | µg/L | No |
| Picloram | 21-May-24 | <0.10 | µg/L | No |
| Polychlorinated Biphenyls (PCB) | 21-May-24 | <0.030 | µg/L | No |
| Prometryne | 21-May-24 | <0.0.25 | µg/L | No |
| Simazine | 21-May-24 | <0.10 | µg/L | No |
| THM (See latest annual average) | | | | |
| Temephos | | | | |
| Terbufos | 21-May-24 | <0.50 | µg/L | No |
| Tetrachloroethylene | 21-May-24 | <0.50 | µg/L | No |
| 2,3,4,6-Trichlorophenol | 21-May-24 | <0.50 | µg/L | No |
| Triallate | 21-May-24 | <0.10 | µg/L | No |
| Trichloroethylene | 21-May-24 | <0.50 | µg/L | No |
| 2,4,6-Trichlorophenol | 21-May-24 | <0.50 | µg/L | No |
| 2,4,6-Trichlorophenoxy acetic acid (2,4,5-T) | | | | |
| Trifluralin | 21-May-24 | <0.10 | µg/L | No |
| Vinyl Chloride | 21-May-24 | <0.50 | µg/L | No |

## THM – Summary Table

| Date of Test | Location | Results (µg/L) |
|---|---|---|
| 22-Jan-24 | MRV Water Tower | 72.0 |
| 05-Feb-24 | MRV Water Tower | 63.3 |
| 11-Mar-24 | MRV Water Tower | 65.5 |
| 15-Apr-24 | MRV Water Tower | 79.5 |
| 30-Apr-24 | MRV Water Tower | 81.4 |
| 13-May-24 | MRV Water Tower | 90.0 |
| 28-May-24 | MRV Water Tower | 96.3 |
| 10-June-24 | MRV Water Tower | 35.7 |
| 24-June-24 | MRV Water Tower | 38.5 |
| 16-July-24 | MRV Water Tower | 50.7 |
| 19-Aug-24 | MRV Water Tower | 79.2 |
| 3-Sept-24 | MRV Water Tower | 37.3 |
| 16-Sept-24 | MRV Water Tower | 41.4 |
| 1-Oct-24 | MRV Water Tower | 54.8 |
| 15-Oct -24 | MRV Water Tower | 35 |
| 28-Oct-24 | MRV Water Tower | 41.1 |
| 12-Nov-24 | MRV Water Tower | 31 |
| 25-Nov-24 | MRV Water Tower | 42.4 |
| | MRV Water Tower | |

Average THM's for the year 2024 was 57.67 µg/L with the maximum acceptable concentration of 100 µg/L (A). "A" – The standard for THM's is expressed as a running annual average.

## HAA – Summary Table

| Date of Test | Location | Results (µg/L) |
|---|---|---|
| 22-Jan-24 | 3 Chris Simon Drive | 50.0 |
| 15-Apr-24 | 3 Chris Simon Drive | 52.8 |
| 16-Jul-24 | 3 Chris Simon Drive | 40.0 |
| 15-Oct-24 | 3 Chris Simon Drive | 29.5 |

Average HAA's for the year 2024 was 43.08 µg/L with the maximum acceptable concentration of 80 µg/L (A). "A" – The standard for HAA's is expressed as a running annual average.

## 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 |
|---|---|---|---|
| | | | |
| | | | |

# Appendix C

**Drinking Water Quality Management Standard**

Certificate of Accreditation

# CERTIFICATE OF ACCREDITATION

This is to certify that the following operating authority:

## Municipality of Wawa

40 Broadway Avenue, Wawa, Ontario P0S 1K0 Canada

**Refer to Attachment to Certificate of Accreditation dated December 12, 2022 for additional drinking water systems**

operates a

## Quality Management System

which conforms with the requirements of

**DRINKING WATER QUALITY MANAGEMENT STANDARD VERSION 2 - 2017**

for the following scope of accreditation

**Full Scope - Entire DWQMS**

| | | | |
|---|---|---|---|
| Certificate No.: | CERT-0148753 | Original Certification Date: | December 17, 2013 |
| File No.: | 1633210 | Certification Effective Date: | December 14, 2022 |
| Issue Date: | December 12, 2022 | | |

Calin Moldovean
President, Business Assurance
SAI Global Assurance

**DWQMS 2017**

# ATTACHMENT TO
# CERTIFICATE OF ACCREDITATION

These sites are accredited under Certificate No: CERT-0148753 issued on December 12, 2022

| File No. | | Effective Date |
|---|---|---|
| 1633210 | **Municipality of Wawa**<br>40 Broadway Avenue, Wawa, Ontario P0S 1K0 Canada | December 14, 2022 |

**Drinking Water Systems**

| | Site No. | Site Name |
|---|---|---|
| Yes | 1633211 | Wawa Drinking Water System |

These accreditations are dependent on Municipality of Wawa (File No. 1633210) maintaining their scope of registration to DRINKING WATER QUALITY MANAGEMENT STANDARD VERSION 2 - 2017

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# Appendix D

**Ministry of the Environment, Conservation and Parks**

Wawa Drinking Water System

Inspection Report and Inspection Rating

Ontario

**Ministry of the Environment, Conservation and Parks**
70 Foster Drive
Suite 110
Sault Ste. Marie ON P6A 6V4
Tel.: 705 942-6354
Fax: 705 942-6327

**Ministère de l'Environnement, de la Protection de la nature et des Parcs**
70, promenade Foster
Bureau 110
Sault Ste. Marie ON P6A 6V4
Tél. : 705 942-6354
Téléc. : 705 942-6327

April 15, 2024

Maury O'Neil
CAO/Clerk, Municipality of Wawa
40 Broadway Ave, P.O. Box 500
Wawa, Ontario, P0S 1K0

**Re: Wawa Drinking Water System (DWS) Inspection – DWS # 210000050**

Dear Mr. O'Neil,

Please find attached the annual Wawa DWS Inspection Report and the Inspection Rating Record (IRR) for 2023/2024. No compliance issues were identified.

The IRR is a summarized quantitative measure of the drinking water system's annual inspection and is published in the Ministry's Chief Drinking Water Inspector's Annual Report. The Risk Methodology document describes the risk rating methodology which has been applied to the findings of the Ministry's municipal residential drinking water system inspection results. Please find attached the corresponding IRR document.

Please be advised that Section 19 of the Safe Drinking Water Act (Standard of Care) outline obligations for individuals who exercise decision-making authority over municipal drinking water systems. As such, the Ministry has encouraged such individuals, particularly municipal councilors, to take steps to be better informed about the drinking water system over which they have decision-making authority. These steps may include asking for a copy of this report.

I would like to thank the municipal water services personnel for their cooperation during the inspection, as it was much appreciated.

In addition, a copy of this report has been provided to Algoma Public Health, as per the Ministry's Drinking Water Inspection Protocol.

Should you have any questions regarding the report, please feel free to contact me at 705-297-1043 or kristy.mitchell@ontario.ca.

Sincerely,

Kristy Mitchell, Water Compliance Officer
Sault Ste. Marie Area Office

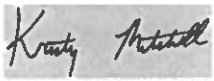
c: Rebecca Weatherall, Dave Lowe, Municipality of Wawa
Mariah Tremblay, Algoma Public Health

Ontario

WAWA DRINKING WATER SYSTEM
Physical Address: 40 BROADWAY AVE, , WAWA, ON P0S 1K0

# INSPECTION REPORT

| | |
|---|---|
| Entity: | CORPORATION OF THE MUNICIPALITY OF WAWA |
| Inspection Start Date: | September 28, 2023 |
| Inspection End Date: | March 26, 2024 |
| Inspected By: | Kristy Mitchell |
| Badge #: | 1193 |
| Inspected By: | Marnie Managhan |
| Badge #: | 718 |



(signature)

**NON-COMPLIANCE**

This should not be construed as a confirmation of full compliance with all potential applicable legal requirements. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

## RECOMMENDATIONS

The following item(s) have been identified as non-conformance, based on a "No" response captured for a best management practice (BMP) question(s). For additional information on each question see the Inspection Details section of the report.

**Ministry Program:** DRINKING WATER | **Regulated Activity:** DW Municipal Residential

| Item | Question | Recommendation(s) |
|---|---|---|
| R-1 | **Question ID:** DWMR1046000<br><br>Is there a backflow prevention program, policy and/or bylaw in place that addresses cross connections and connections to high hazard facilities? | There was no backflow prevention program, policy and/or bylaw in place. |
| R-2 | **Question ID:** DWMR1052000<br><br>Is there a by-law or policy in place limiting access to hydrants? | There was no by-law or policy in place limiting access to hydrants. |

## INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

**Ministry Program:** DRINKING WATER | **Regulated Activity:** DW Municipal Residential

| Question ID | DWMR1001000 | Question Type | Information |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
What was the scope of this inspection?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

Water Compliance Officer comments:

The previous inspection report covered the 2022 calendar year with a site visit occurring on September 29, 2022. The present inspection site visit took place on September 26, 2023 in the company of the Overall Responsible Operator (ORO) and the Assistant Director of Infrastructure Services. The inspection period covers from January 1, 2023 to December 31, 2023, unless otherwise stated. The sampling review runs from January 1, 2023 to December 31, 2023.

The drinking water system (DWS) consists of a Class 2 water treatment subsystem and Class 1 distribution subsystem serving approximately 3000 residents within the town of Wawa and Michipicoten River Village (MRV). The systems are owned and operated by the municipality.

The treatment system consists of a low lift pumping station with the surface water intake in adjacent Wawa Lake. At the WTP, aluminum sulphate is injected seasonally with an inline

static mixer that was installed in 2020 to assist with reducing disinfection by-products, such as THMs. Larger particles are removed in a pre-membrane strainer prior to membrane filtration. The three treatment trails of Pall membrane systems each consist of a feed and backwash tank, feed/recirculation and reverse filtrate pump and a 24 cartridge membrane rack. The system uses cleaning systems involving caustic or acid washes and chlorination (Cleaning In Place – CIP) and Enhanced Flux Maintenance using air scrubbing and two compressors.

Sodium hypochlorite is then added as part of the disinfection process prior to water entering dual contact chambers. Treated water then flows to a onsite, below grade reservoir. Chlorination is provided for both primary and secondary disinfection.

Hydrofluorosilicic acid is added prior to water entering the reservoir. Monitoring is continous for treated water turbidity, chlorine residual, fluoride, flow meters and membrane filter effluent turbidity.

The distribution system covers the main town area. A watermains with pressure reducing valves installed to provide water to the MRV storage tower. The tower has chlorination equipment available for secondary disinfection if needed.

The municipality retained S. Burnett & Associates to complete a Draft Water/Wastewater Master Servicing Plan in July 2023. The DWS also participated in MECP's voluntary Drinking Water Surveillance Program (DWSP).

| **Question ID** | DWMR1000000 | **Question Type** | Information |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Does this drinking water system provide primary disinfection?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
This drinking water system provides for both primary and secondary disinfection and distribution of water.

| **Question ID** | DWMR1010000 | **Question Type** | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Are trends in source water quality being monitored?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Trends in source water quality were being monitored.

The operating authority provided monthly summary reports which demonstrate monitoring of raw turbidity, pH and temperature.

| Question ID | DWMR1011000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Does the owner have a harmful algal bloom monitoring plan in place?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner had a harmful algal bloom monitoring plan in place.

| Question ID | DWMR1012000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner had a harmful algal bloom monitoring plan in place.

The municipality is presently conducting sampling for microcystin LR throughout the spring, summer season. A copy of the Harmful Algal Bloom (HAB) Monitoring, Reporting and Sampling Plan was provided as part of the inspection.

From previous inspection reports and the DWS' annual report, it is understood that seasonal microcystin LR monitoring plan commenced in August 2019 as per MECP recommendations and best management practices. In 2023, sampling was conducted from July to October for raw and treated water with the average Microcystin result of <0.1 ug/L. Given the low results and the characteristics of the raw water source, the municipality has discussed reducing the frequency of seasonal sampling.

Please be advised that the frequency of sampling is to be determined by the Municipality based on potential risks and from observations made during the season. Occasional sampling of micro-cystin LR is still recommended but not required. The DWS is required to have a Harmful Algae Bloom (HAB) plan that meets the requirements of the Municipal Drinking Water Licence (MDWL).

| Question ID | DWMR1014000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.

Both raw and treated water is recorded with flow meters as is the flow to each membrane filter train.

| Question ID | DWMR1015000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Are the flow measuring devices calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SDWA?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The flow measuring devices were calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SWDA.

Records for annual flow measuring device calibrations were visible on the monitors at the time of the site visit.

| Question ID | DWMR1016000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.

The rated capacity for the water treatment plant is 7,880 m3/day, monitored as treated flow to the distribution system. The maximum monthly average flow rate during the inspection review period was 3,000.4 cubic metres/day, approximately 38.1 percent of the total capacity.

| Question ID | DWMR1017000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Were appropriate records of flows and any capacity exceedances made in accordance with the MDWL issued under Part V of the SDWA?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Appropriate records of flows and any capacity exceedances were made in accordance with the Municipal Drinking Water Licence issued under Part V of the SDWA.

| Question ID | DWMR1013000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
OWRA | 34 | (3);

**Question:**
Is the owner in compliance with all conditions of the PTTW?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner was in compliance with all conditions of the PTTW.

The daily water takings records on the Water Taking Record System (WTRS) were not reviewed as the required date is March 31, 2024 for all water taking records made in 2023.

As a reminder, the current PTTW # 8801-A32KAL expires on December 1, 2025.

| Question ID | DWMR1018000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.

| Question ID | DWMR1028000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Are up-to-date plans for the drinking water system kept in place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Up-to-date plans for the drinking water system were kept in a place, or made available in such a manner, that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA.

| Question ID | DWMR1025000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.

| Question ID | DWMR1023000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 1-2 | (2);

**Question:**
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg. 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.

| Question ID | DWMR1027000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Does the owner have evidence indicating that all chemicals and materials which come in contact with water within the drinking water system have met all applicable AWWA and ANSI standards in accordance with the DWWP and MDWL issued under Part V of the SDWA?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner had evidence indicating that all chemicals and materials that come in contact with water within the drinking water system met the AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA.

| Question ID | DWMR1024000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 1-2 | (2);

**Question:**
Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated as required?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.

| Question ID | DWMR1033000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 7-2 | (3); SDWA | O. Reg. 170/03 | 7-2 | (4);

**Question:**
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The secondary disinfectant residual was measured as required for the large municipal residential distribution system.

Records confirmed that distribution chlorine residuals were measured as required.
An on-line chlorine analyzer provides continuous monitoring for the distribution system from the water tower to the Michipicoten River Village portion of the system.

In addition, hand held distribution residuals are records in the WTP main logbook with the location and result.

| Question ID | DWMR1049000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Do records confirm that disinfectant residuals are routinely checked at the extremities and dead ends of the distribution system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Records confirmed that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system.

| Question ID | DWMR1036000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-7 | (1);

**Question:**
Where continuous monitoring equipment is not used for chlorine residual analysis, are samples tested using an acceptable portable device?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Samples for chlorine residual analysis were tested using an acceptable portable device.

| Question ID | DWMR1030000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 7-2 | (1); SDWA | O. Reg. 170/03 | 7-2 | (2);

**Question:**
Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved.

Primary disinfection is monitored at the overflow of the chlorine contact tank as it discharges into the on-site, below grade reservoir. CT is calculated at this location in order to ensure that sufficient contact time occurs prior to the reservoir. This allows for the high lift pumps of the reservoir to continue pumping if an alarm indicates a low chlorine residual for the contact tank discharge.

| Question ID | DWMR1031000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Are operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.

The WTP CT procedure was provided during the inspection. The daily CT calculation is performed manually by the operator using the previous day daily reports. It is recorded on the reverse of the CT log trending sheet that is printed daily.

| Question ID | DWMR1032000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 7-3 | (2);

**Question:**
If the drinking water system obtains water from a surface water source and provides filtration, is continuous monitoring of each filter effluent line being performed for turbidity?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Continuous monitoring of each filter effluent line was being performed for turbidity.

The Procedure for the Disinfection of Drinking Water in Ontario requires that membrane filtration meet the performance criterion for filtered water turbidity of less than or equal to 0.1 NTU in 99% of the measurements each month.

The DWS confirmed that the average turbidity from all three membrane skids was 0.03 NTU.

| Question ID | DWMR1035000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4; SDWA | O. Reg. 170/03 | 6-5 | (1)5-10;

**Question:**
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.

Logbook records indicated that 72 hour trends were checked.

| Question ID | DWMR1038000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4;

**Question:**
Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.

| Question ID | DWMR1037000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4; SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

**Question:**
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.

| Question ID | DWMR1040000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4; SDWA | O. Reg. 170/03 | 6-5 | (1)5-10;

**Question:**
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.

| Question ID | DWMR1108000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4; SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

**Question:**
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.

| Question ID | DWMR1099000 | Question Type | Information |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03)?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03).

| Question ID | DWMR1079000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 10-4 | (1); SDWA | O. Reg. 170/03 | 10-4 | (2); SDWA | O. Reg. 170/03 | 10-4 | (3);

**Question:**
For LMR systems, are all microbiological water quality monitoring requirements for raw water samples prescribed by legislation being met?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All microbiological water quality monitoring requirements prescribed by legislation for raw water samples were being met.

A Ministry electronic database review for microbiological sampling was conducted. In

addition, a review of the logbook documentation for sampling was also reviewed.

Although, one week of raw water sampling was not submitted (January 8 to 15, 2023), the ORO indicated that the samples could not be shipped due to a highway accident. MECP was notified of the issue.

| Question ID | DWMR1081000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 10-2 | (1); SDWA | O. Reg. 170/03 | 10-2 | (2); SDWA | O. Reg. 170/03 | 10-2 | (3);

**Question:**
For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met.

The one week of distribution sampling that could not be met was January 8 to 15, 2023 when samples could not be shipped to the lab due to an inability to transport them via the highway. The logbook indicated that a MECP Water Compliance Officer was notified of the issue.

| Question ID | DWMR1083000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 10-3;

**Question:**
For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met.

As indicated above, one week of sampling was missed for transportation reasons. The issue was documented in the operator's logbook.
MECP was notified.

| Question ID | DWMR1096000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-3 | (1);

**Question:**
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.

| Question ID | DWMR1084000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 13-2;

**Question:**
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

The most recent sampling for inorganic parameters as per the Schedule occurred on December 14, 2023.

| Question ID | DWMR1085000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 13-4 | (1); SDWA | O. Reg. 170/03 | 13-4 | (2); SDWA | O. Reg. 170/03 | 13-4 | (3);

**Question:**
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

The most recent sampling for organic parameters as per the schedule was December 14, 2023.

| Question ID | DWMR1086000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 13-6.1 | (1); SDWA | O. Reg. 170/03 | 13-6.1 | (2); SDWA | O. Reg. 170/03 | 13-6.1 | (3); SDWA | O. Reg. 170/03 | 13-6.1 | (4); SDWA | O. Reg. 170/03 | 13-6.1 | (5); SDWA | O. Reg. 170/03 | 13-6.1 | (6);

**Question:**
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

HAAs were measured quarterly as required with a running average at the end of the review period (December 2023) of 48.9 ug/L.

| **Question ID** | DWMR1087000 | **Question Type** | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 13-6 | (1); SDWA | O. Reg. 170/03 | 13-6 | (2); SDWA | O. Reg. 170/03 | 13-6 | (3); SDWA | O. Reg. 170/03 | 13-6 | (4); SDWA | O. Reg. 170/03 | 13-6 | (5); SDWA | O. Reg. 170/03 | 13-6 | (6);

**Question:**
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

The far end of the distribution system (the water tower) was sampled multiple times per quarter in 2023. The running average was calculated at 78.4 ug/L.

| **Question ID** | DWMR1088000 | **Question Type** | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 13-7;

**Question:**
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

| **Question ID** | DWMR1089000 | **Question Type** | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 13-8;

**Question:**
Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All sodium water quality monitoring requirements prescribed by legislation were conducted

within the required frequency.

The most recent sample was taken on June 14, 2022 with a result of 7.34 mg/L.

| Question ID | DWMR1091000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 7-4;

**Question:**
Where fluoridation is practiced, are the required daily samples being taken at the end of the fluoridation process?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The required daily samples were being taken at the end of the fluoridation process.

Fluoride levels are continuously monitored prior to entering the distribution system.

| Question ID | DWMR1092000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-2;

**Question:**
Has the owner ensured that water samples are taken at the prescribed location?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner ensured that water samples were taken at the prescribed location.

| Question ID | DWMR1095000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 15.1-10; SDWA | O. Reg. 170/03 | 15.1-4 | (1); SDWA | O. Reg. 170/03 | 15.1-5 | (1); SDWA | O. Reg. 170/03 | 15.1-5 | (10); SDWA | O. Reg. 170/03 | 15.1-5 | (11); SDWA | O. Reg. 170/03 | 15.1-5 | (12); SDWA | O. Reg. 170/03 | 15.1-5 | (2); SDWA | O. Reg. 170/03 | 15.1-5 | (3); SDWA | O. Reg. 170/03 | 15.1-5 | (4); SDWA | O. Reg. 170/03 | 15.1-5 | (5); SDWA | O. Reg. 170/03 | 15.1-5 | (6); SDWA | O. Reg. 170/03 | 15.1-5 | (7); SDWA | O. Reg. 170/03 | 15.1-5 | (8); SDWA | O. Reg. 170/03 | 15.1-5 | (9); SDWA | O. Reg. 170/03 | 15.1-7 | (1); SDWA | O. Reg. 170/03 | 15.1-7 | (2); SDWA | O. Reg. 170/03 | 15.1-7 | (3); SDWA | O. Reg. 170/03 | 15.1-7 | (4); SDWA | O. Reg. 170/03 | 15.1-9 | (1); SDWA | O. Reg. 170/03 | 15.1-9 | (2); SDWA | O. Reg. 170/03 | 15.1-9 | (3); SDWA | O. Reg. 170/03 | 15.1-9 | (4); SDWA | O. Reg. 170/03 | 15.1-9 | (5); SDWA | O. Reg. 170/03 | 15.1-9 | (6); SDWA | O. Reg. 170/03 | 15.1-9 | (7); SDWA | O. Reg. 170/03 | 15.1-9 | (8); SDWA | O. Reg. 170/03 | 15.1-9 | (9);

**Question:**
Have all lead sampling requirements prescribed by Schedule 15.1 of O. Reg. 170/03 been met?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.

The municipality is exempt from lead testing in plumbing and conducts 4 distribution tests. There were no exceedances of the standard in 2023.

| Question ID | DWMR1098000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 13 | (1); SDWA | O. Reg. 170/03 | 13 | (2); SDWA | O. Reg. 170/03 | 13 | (3);

**Question:**
Has the owner indicated that the required records are kept and will be kept for the required time period?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner indicated that the required records are kept and will be kept for the required time period.

| Question ID | DWMR1101000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 17-1; SDWA | O. Reg. 170/03 | 17-10 | (1); SDWA | O. Reg. 170/03 | 17-11; SDWA | O. Reg. 170/03 | 17-12; SDWA | O. Reg. 170/03 | 17-13; SDWA | O. Reg. 170/03 | 17-14; SDWA | O. Reg. 170/03 | 17-2; SDWA | O. Reg. 170/03 | 17-3; SDWA | O. Reg. 170/03 | 17-4; SDWA | O. Reg. 170/03 | 17-5; SDWA | O. Reg. 170/03 | 17-6; SDWA | O. Reg. 170/03 | 17-9;

**Question:**
For LMR Systems, have corrective actions (as per Schedule 17 of O. Reg. 170/03) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Corrective actions (as per Schedule 17), including any other steps that were directed by the Medical Officer of Health, had been taken to address adverse conditions.

| Question ID | DWMR1103000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 15.1-10;

**Question:**
Have corrective actions as directed by the Medical Officer of Health been taken by the owner and operating authority to address exceedances of the lead standard in plumbing?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Corrective actions as directed by the Medical Officer of Health had been taken by the owner and operating authority to address exceedances of the lead standard.

| Question ID | DWMR1104000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 16-6 | (1); SDWA | O. Reg. 170/03 | 16-6 | (2); SDWA | O. Reg. 170/03 | 16-6 | (3); SDWA | O. Reg. 170/03 | 16-6 | (3.1); SDWA | O. Reg. 170/03 | 16-6 | (3.2); SDWA | O. Reg. 170/03 | 16-6 | (4); SDWA | O. Reg. 170/03 | 16-6 | (5); SDWA | O. Reg. 170/03 | 16-6 | (6);

**Question:**
Were all required verbal notifications of adverse water quality incidents immediately provided as per O. Reg. 170/03 16-6?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.

| Question ID | DWMR1105000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 16-7 | (1); SDWA | O. Reg. 170/03 | 16-7 | (2); SDWA | O. Reg. 170/03 | 16-7 | (3); SDWA | O. Reg. 170/03 | 16-7 | (4); SDWA | O. Reg. 170/03 | 16-7 | (5);

**Question:**
Were all required written notices of adverse water quality incidents provided as per O. Reg. 170/03 16-7?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All required written notices of adverse water quality incidents were provided as per O. Reg. 170/03 16-7.

| Question ID | DWMR1106000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 16-9 | (1); SDWA | O. Reg. 170/03 | 16-9 | (2);

**Question:**
Were all required written notices of issue resolution provided as per O. Reg. 170/03 16-9?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All required written notices of issue resolution were provided as per O. Reg. 170/03 16-9.

| Question ID | DWMR1107000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 15.1-9 | (1); SDWA | O. Reg. 170/03 | 15.1-9 | (2); SDWA | O. Reg. 170/03 | 15.1-9 | (3); SDWA | O. Reg. 170/03 | 15.1-9 | (4); SDWA | O. Reg. 170/03 | 15.1-9 | (5); SDWA | O. Reg. 170/03 | 15.1-9 | (6); SDWA | O. Reg. 170/03 | 15.1-9 | (7); SDWA | O. Reg. 170/03 | 15.1-9 | (8); SDWA | O. Reg. 170/03 | 15.1-9 | (9);

**Question:**
Were all reporting requirements for lead sampling complied with as per Schedule 15.1-9 of O. Reg. 170/03?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All reporting requirements for lead sampling were complied with as per schedule 15.1-9 of O. Reg. 170/03.

There were no exceedances under the requirements of the community lead testing program in 2023. The municipality is required to take four distribution samples and is exempt from plumbing sampling. There were no exceedances from these four samples.

However, as part of the Ministry's voluntary drinking water surveillance program, a sample taken at the municipal lagoon building had a lead result of 67.4 ug/L. A resample at the same fixture indicated a standing sample result of 75.1 ug/L and a flushed result of 30.0 ug/L (AWQI #163146). This result was determined to be related to fixture itself. After consulting with the health unit and MECP, the municipality posted the sink as non-potable and not to use the sink as an alternative sink as available in the building. The location is inaccessible to the public.

| Question ID | DWMR1110000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 11 | (6);

**Question:**
Was an Annual Report containing the required information prepared by February 28 of the following year?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The Annual Report containing the required information was prepared by February 28th of the following year.

| Question ID | DWMR1111000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 22-2 | (1); SDWA | O. Reg. 170/03 | 22-2 | (2); SDWA | O. Reg. 170/03 | 22-2 | (3); SDWA | O. Reg. 170/03 | 22-2 | (4);

**Question:**
Have Summary Reports for municipal council been completed on time, include the required content, and distributed in accordance with the regulatory requirements?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Summary Reports for municipal council were completed on time, included the required content, and were distributed in accordance with the regulatory requirements.

| Question ID | DWMR1043000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Are the process wastewater and residual solids/sludges being treated, handled and disposed of in accordance with the design requirements approved under the Drinking Water Works Permit and the Municipal Drinking Water Licence?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The process wastewater and residual solids/sludges were treated, handled and disposed of in accordance with the design requirements approved under the Drinking Water Works Permit and the Municipal Drinking Water Licence.

Process wastewater is directed to the sanitary system.

| Question ID | DWMR1046000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Is there a backflow prevention program, policy and/or bylaw in place that addresses cross connections and connections to high hazard facilities?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
There was no backflow prevention program, policy and/or bylaw in place.

There are no significant connections to heavy industry in the town.

| Question ID | DWMR1053000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Is the Owner able to maintain proper pressures in the distribution system and is pressure monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner was able to maintain proper pressures in the distribution system and pressure was monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate.

The operator and inspector discussed system pressures during the inspection.

| Question ID | DWMR1047000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Does the owner have a program or maintain a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system.

The municipality indicated that they try to follow a cleanout/inspection schedule of every five years.

| Question ID | DWMR1048000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Has the owner implemented a program for the flushing of watermains as per industry standards?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner had implemented a program for the flushing of watermains as per industry standards.

Flushing of watermains was conducted in the spring of 2023.

| Question ID | DWMR1050000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Is there a program in place for inspecting and exercising valves?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
There was a program in place for inspecting and exercising valves.

| Question ID | DWMR1051000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Is there a program in place for inspecting and operating hydrants?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
There was a program in place for inspecting and operating hydrants.

Sixteen hydrants were replaced in 2023.

| Question ID | DWMR1052000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Is there a by-law or policy in place limiting access to hydrants?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
There was no by-law or policy in place limiting access to hydrants.

| Question ID | DWMR1058000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 28;

**Question:**
Do operators and maintenance personnel have ready access to operations and maintenance manuals?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Operators and maintenance personnel had ready access to operations and maintenance manuals.

| Question ID | DWMR1059000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 28;

**Question:**
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.

| Question ID | DWMR1060000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | 31 | (1);

**Question:**
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.

Previous inspections have confirmed that the manuals meet the requirements of the DWWP and MDWL. During the site visit, the ORO was organized and able to provide operation manual and equipment references easily.

| Question ID | DWMR1061000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 27 | (1); SDWA | O. Reg. 128/04 | 27 | (2); SDWA | O. Reg. 128/04 | 27 | (3); SDWA | O. Reg. 128/04 | 27 | (4); SDWA | O. Reg. 128/04 | 27 | (5); SDWA | O. Reg. 128/04 | 27 | (6); SDWA | O. Reg. 128/04 | 27 | (7);

**Question:**
Are logbooks properly maintained and contain the required information?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Logbooks were properly maintained and contained the required information.

The municipality has created their own logbooks with notes and daily checks for recording observations and readings from SCADA. A sample of logbooks were requested and provided to the undersigned. On duty operators document visits to the low lift pump station and record raw water readings such as raw turbidity, pH, temp and daily flows.

| Question ID | DWMR1062000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 7-5;

**Question:**
Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.

| Question ID | DWMR1063000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 6-10 | (1);

**Question:**
For every required operational test and for every required sample, is a record made of the date, time, location, name of the person conducting the test and result of the test?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
For every required operational test and every required sample, a record was made of the date, time, location, name of the person conducting the test and result of the test.

| Question ID | DWMR1064000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 26 | (2);

**Question:**
Did the operator-in-charge ensure that records were maintained of all adjustments made to the processes within his or her responsibility?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The operator-in-charge ensured that records were maintained of all adjustments made to the processes within his or her responsibility.

| Question ID | DWMR1065000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 27 | (6);

**Question:**
Are logs and other record keeping mechanisms available for at least five (5) years?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Logs or other record keeping mechanisms were available for at least five (5) years.

SCADA reports, logbooks, daily check records and maintenance records are kept for at least five years (often up to ten).

| Question ID | DWMR1066000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Is spill containment provided for process chemicals and standby power generator fuel?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Spill containment was provided for process chemicals and/or standby power generator fuel.

All process chemicals and fuel are stored indoors and although they may not all have dedicated spill containment, there are contingency measures in place.

| Question ID | DWMR1067000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Are clean-up equipment and materials in place for the clean up of spills?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Clean-up equipment and materials were in place for the clean up of spills.

| Question ID | DWMR1068000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
If available, are standby power generators tested under normal load conditions?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Standby power generators were tested under normal load conditions.

| Question ID | DWMR1069000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Are all storage facilities completely covered and secure?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All storage facilities were completely covered and secure.

| Question ID | DWMR1071000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Has the owner provided security measures to protect components of the drinking water system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner had provided security measures to protect components of the drinking water system.

| Question ID | DWMR1072000 | Question Type | BMP |
|---|---|---|---|

**Legislative Requirement(s):**
Not Applicable

**Question:**
Has the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in their system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system.

The older section of the distribution system has some by-passes in place in order to prevent freezing of shallow pipes. Notices are issued every spring to residents who have bypasses to shut them off.

| Question ID | DWMR1073000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 23 | (1);

**Question:**
Has the overall responsible operator been designated for all subsystems which comprise the

drinking water system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
The overall responsible operator had been designated for each subsystem.

In 2022, staffing shortages resulting in the municipally temporarily retaining Kresin Engineering as the ORO.

As of the time of the 2023 inspection, a municipally employed Class 2 operator had assumed the role of ORO.

| Question ID | DWMR1078000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 23 | (1); SDWA | O. Reg. 128/04 | 23 | (2); SDWA | O. Reg. 128/04 | 23 | (4); SDWA | O. Reg. 128/04 | 23 | (6); SDWA | O. Reg. 128/04 | 23 | (7);

**Question:**
In instances where the overall responsible operator was unable to act, was an adequately certified operator designated to act in place of the overall responsible operator?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
An adequately licenced operator was designated to act in place of the overall responsible operator when the overall responsible operator was unable to act.

The ORO acted as the OIC throughout the remainder of 2023 (once the role was reverted from Professional Engineer). The other operators at the time were OITs.

In 2024, it was determined that these operators had obtained Class 1 licences for water treatment.

| Question ID | DWMR1074000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 25 | (1);

**Question:**
Have operators-in-charge been designated for all subsystems which comprise the drinking water system?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Operators-in-charge had been designated for all subsystems which comprise the drinking water system.

| Question ID | DWMR1075000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 128/04 | 22;

**Question:**
Do all operators possess the required certification?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
All operators possessed the required certification.

| Question ID | DWMR1076000 | Question Type | Legislative |
|---|---|---|---|

**Legislative Requirement(s):**
SDWA | O. Reg. 170/03 | 1-2 | (2);

**Question:**
Do only certified operators make adjustments to the treatment equipment?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**
Only certified operators made adjustments to the treatment equipment.