

Ministry of the Environment, Conservation Ministère de l'Environnement, de la Protection de  
and Parks la nature et des Parcs

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March 10<sup>th</sup>, 2025

by Email

Paul Laperriere, CAO  
The Corporation of the Town of Mattawa  
160 Water St.  
Mattawa, ON P0H 1V0

**RE: Inspection of Mattawa Drinking Water System (No. 210001905) at 400 Bissett St.,  
Mattawa, ON on January 25, 2025 | Planned Event No. 1-328895921**

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Attached to this letter is the report for the announced inspection completed at the Mattawa Drinking Water System at 400 Bissett St. Mattawa, ON on January 25<sup>th</sup>, 2025 and the corresponding Incident Rating Report (IRR) and Risk Methodology document. This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only.

CORRECTIVE ACTIONS

Instances of non-compliance and/or non-conformance were identified during the inspection. Please refer to the "Non-Compliance/Non-Conformance Items" section within the report to determine the actions required and take any necessary steps by the date(s) prescribed to bring the system/facility into compliance/conformance.

The IRR is a summarized quantitative measure of the drinking water system's annual inspections 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.

Thank you for your co-operation. If you have any questions about the inspection process, including this information request, please contact me at (705) 358-1316 or by email at [erin.spires@ontario.ca](mailto:erin.spires@ontario.ca).

Sincerely,



Erin Spires  
Provincial Officer Badge #1540 and Water Inspector  
Drinking Water and Environmental Compliance Division  
Ministry of the Environment, Conservation and Parks' North Bay Area Office

Attachments

Cc: B. Allen, Program Manger(A) – North Bay Parry Sound District Health Unit  
R. A-Muhong, Manager – North Bay Parry Sound District Health Unit  
Source Protection, North Bay – Mattawa Conservation Authority  
P. Dryda, Sr. Operations Manager – Ontario Clean Water Agency  
J. DeWaal, Overall Responsible Operator – OCWA  
M. Malette, Process and Compliance Technician – OCWA  
S. Ilersich, Supervisor – MECP – DWECD – Timmins/North Bay Office  
A. Belanger, District Manager(A) – Ministry of Natural Resources and Forestry – North Bay Office



MATTAWA DRINKING WATER SYSTEM

Physical Address: 400 BISSETT ST, , MATTAWA,  
ON

## INSPECTION REPORT

System Number: 210001905  
Entity: MATTAWA MUNICIPAL  
CORPORATION  
Inspection Start Date: January 23, 2025  
Site Inspection Date: January 23, 2025  
Inspection End Date: February 25, 2025  
Inspected By: Erin Spires  
Badge #: 1540



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(signature)

## INTRODUCTION

### Purpose

This announced, detailed inspection was conducted to confirm compliance with Ministry of the Environment, Conservation and Parks' (MECP) legislation and conformance with ministry drinking water policies and guidelines.

### Scope

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 and the operation of the system.

The inspection of the drinking water system included both the physical inspection of the component parts of the system listed in the "System Components" of the report and the review of data and documents associated with the operation of the drinking water system during the review period.

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.

### Facility Contacts and Dates

The drinking water system is owned by the Corporation of the Town of Mattawa and operated by the Ontario Clean Water Agency (OCWA).

The system serves an estimated population of 2 150 and is categorized as a Large Municipal Residential Drinking Water System (DWS). Information reviewed for this inspection covered the time period of February 9, 2024 to January 23, 2025.

Water Compliance Officer Erin Spires met with Monique Malette, Process and Compliance Technician, OCWA. Additional information was provided by Josh DeWaal, Sr. Operator and one of the Operators with Overall Responsibility, OCWA.

### Systems/Components

The following sites were visited as part of the inspection of the drinking water system:

Well No. 1 (Well Record No. 4300581):

Well No. 1 was constructed in 1958. It is the larger of the two wells located within the well house at 400 Bissett St. It is a gravel wall type of construction and had a total depth of 26.5 m. A 660 mm diameter steel outer casing extends from grade to a depth of 19.1 m. A 400 mm diameter stainless steel screen extends from 22.1 m to 26.7 m. Well #1 is equipped with a 100 Hp vertical turbine pump and is rated at 53 L/sec at a 105.8 m TDH. The pump is set at approximately 21.9 m below grade. The well head is approximately 30 cm above the pumphouse floor. Well #1 is generally operated as the duty well from 6 am to midnight to meet the higher water demand. The switchover of well pumps is controlled by a timer within the system's programmable logic controller.

Well No. 2 (Well Record No. 4300579):

Well No. 2 was constructed in 1949. It is the smaller of the two wells located within the well house at 400 Bissett Street. It is a gravel wall type well construction and has a total depth of 23.8 m. A 560 mm diameter steel outer casing extends from grade to a depth of 18.6 m. A 300 mm diameter inner casing extends from grade to 20.6 m and a 300 mm diameter #6 stainless steel screen extends from 20.6 m to 23.6m. Well No. 2 is equipped with a 40 Hp vertical turbine pump and is rated at 22.7 L/sec at a 91.5 m TDH. The pump is set at approximately 17.3 m below grade. The well head is approximately 15 cm above the pumphouse floor. Well No. 2 is generally operated as the duty well from midnight to 6 am for energy conservation purposes.

## Treated Water

The pumphouse is located at 400 Bissett St. Raw water flows from the wells into a common 200 mm discharge header within the pump house. Primary disinfection is achieved using two ultraviolet reactors. Each unit is capable of providing a minimum ultraviolet dosage of 40 mJ/cm<sup>2</sup> at a peak flow rate of 75.7 L/sec and raw water ultraviolet transmittance of 95%.

Secondary disinfection with 12% sodium hypochlorite is completed in the common discharge header prior to entry to the distribution system. The hypochlorite system consists of one 200 L storage tank, with spill containment, and two chemical metering pumps (one duty and one standby) with discharge lines into the common discharge header. The chemical metering pumps are equipped with an automatic switch-over device and controls which provide for flow proportional dosing. If both dosing pumps fail an alarm to the pager is initiated and the raw water pumps automatically shut down. A sample line is installed on the 150 mm discharge header so that continuous online monitoring for free chlorine residual can be achieved. There is a pipe that provides treated water from the point of entry to the distribution system that is used for cooling of the diesel generator and the UV reactors during their warm up cycle and for water

lubrication of Well No. 1's pump.

A SCADA system is used for automated control of the water production and treatment components and to produce the required performance and monitoring reports. Backup power is supplied by a 300 kW diesel generator equipped with an automatic transfer switch and a 2 200 L capacity above ground fuel tank. This system can run the entire pumphouse and nearby sewage lift station.

## Reservoir

The in-ground reservoir has an operating capacity of 795 m<sup>3</sup> and is located 700 m to the northwest of the well house. The normal high operating water level in the reservoir is approximately 70 m of elevation above the well house. The reservoir is located within a fenced compound and is equipped with two access hatches, two vent pipes and an overflow pipe. Monitoring of the reservoir level is used to control the operation of the well pumps at the pumphouse.

## Distribution System

The Mattawa distribution system is designated as a Class 2 Water Distribution System. The distribution system is fed from the well house when the pumps are operating, with excess water being directed to the elevated in-ground reservoir. When the well pumps are off the distribution is gravity fed from the reservoir. The system has approximately 1 050 service connections to residential and commercial consumers. There is approximately 20 000 m of various sized cast iron, ductile iron and PVC piping. There are 107 fire hydrants and 239 valves in the distribution system.

## Permissions/Approvals

The drinking water system was subject to specific conditions contained within the following permissions and/or approvals (please note this list is not exhaustive) at the time of the inspection in addition to the requirements of the SDWA and its regulations:

- Drinking Water Works Permit (Permit) No. 195-201 (Issue No. 3) dated December 3, 2021
- Municipal Drinking Water Licence (Licence) No. 195-101 (Issue No. 4) dated December 3, 2021
- Permit To Take Water (PTTW) No. P-300-9212085377 (issued April 13, 2024)
- Previous ministry inspection reports dated February 14, 2024 and November 29, 2022



### NON-COMPLIANCE

The following item(s) have been identified as non-compliance, based on a "No" response captured for a legislative 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                                                                                                                                                                         | Compliance Response/Corrective Action(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NC-1 | <p><b>Question ID:</b><br/>DWMR1064001</p> <p>Did an operator-in-charge ensure that records were maintained of all adjustments to the processes within their responsibility?</p> | <p>The operator-in-charge did not ensure that records were maintained of all adjustments to the processes within their responsibility.</p> <p><b>REQUIRED ACTIONS:</b></p> <p>The owner and operating authority shall ensure that the date is recorded on the UV Reference Check Readings sheet.</p> <p>By no later than June 30th, 2025, the owner and operating authority shall provide to Water Compliance Officer Erin Spires (Ministry of the Environment, Conservation, and Parks' North Bay Office) a copy of the UV Reference Check Readings sheet from January to June 2025.</p>                                                                          |
| NC-2 | <p><b>Question ID:</b><br/>DWMR1033001</p> <p>Was secondary disinfectant residual tested as required for the large municipal residential distribution system?</p>                | <p>Secondary disinfectant residual was not tested as required for the large municipal residential distribution system.</p> <p><b>REQUIRED ACTIONS:</b></p> <p>A review of the Mattawa Distribution System Chlorine Monitoring sheets for the inspection period indicates that a set of four chlorine residuals were taken on October 29th, 2024. However, a second set of three chlorine residuals were not taken during the week (at least 48 hours apart) as required.</p> <p>The operator indicated that the samples were taken during the week but were not recorded on the distribution residual sheet.</p> <p>The operating authority indicated that the</p> |

|      |                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                                                                                                                                                                                            | distribution system residual sheets will be reviewed monthly to ensure that the distribution system chlorine residuals are taken twice each week and recorded as required.                                                                                                                                                                                                     |
| NC-3 | <p><b>Question ID:</b><br/>DWMR1097001</p> <p>If the drinking water system obtained water from a ground water source, was turbidity tested at least once every month from each well that supplied water to the system?</p> | <p>Turbidity was not tested at least once every month from each well that supplied water to the system.</p> <p><b>REQUIRED ACTIONS:</b></p> <p>The owner and operating authority shall ensure that monthly raw water samples taken from each well and tested for turbidity are taken at least 20 days apart, and not more than 40 days, after a previous sample was taken.</p> |

## 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  | <p><b>Question ID:</b><br/>DWMR1046001</p> <p>Was there a backflow prevention program, policy and/or bylaw in place that addressed cross connections and connections to high hazard facilities?</p> | <p>There was no backflow prevention program, policy and/or bylaw in place.</p> <p><b>RECOMMENDATIONS:</b></p> <p>It is recommended as a best management practice that the owner develop a backflow prevention program, policy, or bylaw to address cross connections and connections to high hazard facilities. The ministry's Backflow Prevention Guide (found at: <a href="https://www.ontario.ca/page/guide-drinking-water-system-owners-seeking-undertake-backflow-prevention-program">https://www.ontario.ca/page/guide-drinking-water-system-owners-seeking-undertake-backflow-prevention-program</a>) should be used as a reference in developing the backflow prevention program.</p>                                    |
| R-2  | <p><b>Question ID:</b><br/>DWMR1050001</p> <p>Was there a program in place for inspecting and exercising valves?</p>                                                                                | <p>There was no program in place for inspecting and exercising valves.</p> <p><b>RECOMMENDATION:</b></p> <p>It is recommended, as a best management practice, that the owner develop and implement a program for inspecting and exercising valves based on the AWWA Standard G200-15 Distribution System Operation and Management.</p> <p>The AWWA Standard identifies the following minimum requirements for a valve exercising program including:</p> <ol style="list-style-type: none"> <li>1) A goal for the number of transmission valves to be exercised annually based on the percentage of the total valves in the system;</li> <li>2) A goal for the number of distribution valves to be exercised annually;</li> </ol> |

3) Measures to verify that the goals are met and written procedures for action if the goals are not attained;

4) Identification of critical valves in the distribution system exercising on a regular basis;

5) Recognition of potential quality and isolation concerns;

6) Tracking of annual results and set goals to reduce the percent of inoperable valves.

## INSPECTION DETAILS

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

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

| Question ID                                                                                                                                                                                                                | DWMR1007001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-2   (1)1;                                                                                                                                                  |             |               |             |
| <b>Question:</b><br>Was the owner maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials?                                                   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner was maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DWMR1009001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |               |             |
| <b>Question:</b><br>Were measures in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Measures were in place to protect the groundwater and/or GUDI source.<br><br>Condition 16.2.8 through 16.2.10 of Schedule B of the Licence requires that the operations and maintenance manual shall include, at a minimum, an inspection schedule for all wells associated with the drinking water system, well inspection and maintenance procedures, and remedial action plans for situations of non-compliance and/or risk to the raw water quality.<br><br>The Annual Well Inspections on Well No. 1 and 2 occurred on September 12th, 2024.<br><br>There is a Standard Operating Procedure for Above Grade Well Inspection of Well Components of the Mattawa DWS Wells (issued July 23rd, 2019) and a Standard Operating Procedure for Below Grade Well Inspection of Well Components of the Mattawa DWS Wells (issued July 19th, 2019). |             |               |             |

| Question ID                                                                                                                                                                                                                       | DWMR1010001 | Question Type | BMP |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                              |             |               |     |
| <b>Question:</b><br>Were trends in source water quality monitored?                                                                                                                                                                |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Trends in source water quality were monitored.<br><br>Flow monitoring is continuously monitored for both wells and turbidity sampling is conducted monthly. |             |               |     |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DWMR1014001 | Question Type | Legislative |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |               |             |
| <b>Question:</b><br>Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Flow monitoring was performed as required.<br><br>Condition 2.1 of Schedule C of the Licence specifies that for the Mattawa Water Treatment Plant continuous flow measurement and recording shall be undertaken for:<br><br>- The flow rate (L/s) and daily volume (m3/day) of treated water that flows from the treatment subsystem into the distribution system, and;<br><br>- The flow rate (L/s) and daily volume (m3/day) of raw water that flows into the treatment subsystem.<br><br>The Mattawa WTP has a magnetic flow meter on Well No. 2 to monitor raw water and two treated water flow meters installed on the discharge header to the distribution system (one magnetic and one ultrasonic).<br><br>The raw water flow rate and volume from Well No. 1 is calculated based on the difference in flow between the treated water and Well No. 2's flow rate. |             |               |             |

| Question ID                                                                                                                                         | DWMR1015001 | Question Type | Legislative |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                              |             |               |             |
| <b>Question:</b><br>Were flow measuring devices calibrated or verified in accordance with the requirements of the Municipal Drinking Water Licence? |             |               |             |

**Compliance Response(s)/Corrective Action(s)/Observation(s):**

Flow measuring devices were calibrated or verified as required.

Condition 3.2 of Schedule C of the Licence specifies that, if the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and where necessary calibrated at least once every 12 months during which the drinking water system is in operation.

The equipment shall be checked and where necessary calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

A review of the verification records for the inspection period indicates that the treated water flowmeters and Well No. 2 flowmeter were verified on March 25th, 2024.

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DWMR1016001 | Question Type | Legislative |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |               |             |
| <b>Question:</b><br>Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?                                                                                                                                                                                                                                                                                                                                                                                                           |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions.<br><br>Condition 1.1 of Schedule C of the Licence specifies the rated capacity as 6 540 m <sup>3</sup> /day of treated water that flows from the treatment subsystem to the distribution system.<br><br>A review of the flow information for the inspection period indicates that the maximum volume of daily treated flow was 2117.98 m <sup>3</sup> /day on October 2nd, 2024. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                           | DWMR1013001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>OWRA   34   (3);                                                                                                                                                                                                                                                                                                |             |               |             |
| <b>Question:</b><br>Was the owner in compliance with all conditions of the Permit To Take Water?                                                                                                                                                                                                                                                      |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner was in compliance with all conditions of the Permit To Take Water.<br><br>Condition 3.2 of the Permit To Take Water No. P-300-9212085377 states that the Corporation of the Town of Mattawa shall, for the purpose of a municipal water supply, only take water from: |             |               |             |

- Well No. 1 at a rate of 3 183 min/L (53.05 L/sec) and 4 582.08 m3/day, and;
- Well No. 2 at a rate of 1 364 min/L (22.73 L/sec) and 1 964.16 m3/day.

The maximum daily raw water volume from Well No. 1 was 2 485.32 m3/day and 1 574.1 m3/day for Well No. 2.

| Question ID                                                                                                                                            | DWMR1018001 | Question Type | Legislative |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                 |             |               |             |
| <b>Question:</b><br>Did the owner ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner ensured that equipment was installed as required.                      |             |               |             |

| Question ID                                                                                                                                                                                              | DWMR1021001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                   |             |               |             |
| <b>Question:</b><br>Were Form 2 documents prepared as required?                                                                                                                                          |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Form 2 documents were prepared as required.<br><br>A Form 2, dated May 28th, 2024, was completed for the UVT Analyzer replacement. |             |               |             |

| Question ID                                                                                                                                                                                                                                               | DWMR1019001 | Question Type | Legislative |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                                                                    |             |               |             |
| <b>Question:</b><br>Were Director Notifications prepared and submitted as required?                                                                                                                                                                       |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Director Notifications were prepared and submitted as required.<br><br>There is a Director's Notification, dated July 22nd, 2024, for the replacement of the Optiview UVT Analyzer. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                  | DWMR1028001 | Question Type | Legislative |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                                                                                                                                       |             |               |             |
| <b>Question:</b><br>Were up-to-date plans for the drinking water system 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 Drinking Water Works Permit and Municipal Drinking Water Licence? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Plans for the drinking water system were kept up-to-date and made available as required.                                                                                                                                                               |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DWMR1023001 | Question Type | Legislative |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-2   (2);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |               |             |
| <b>Question:</b><br>Did records indicate that the treatment equipment was operated in a manner that achieved the design capabilities prescribed by O. Reg. 170/03, Drinking Water Works Permit and/or Municipal Drinking Water Licence at all times that water was being supplied to consumers?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed.<br><br>Section 1-3 of Schedule 1 of O. Reg. 170/03 requires that the owner of a drinking water system that uses water from a raw water supply that is ground water must ensure that the water treatment equipment provided is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario, including at least 99 percent (2 log) inactivation of viruses by the time water enters the distribution system.<br><br>Ultraviolet Disinfection provides 2 log inactivation credits for Cryptosporidium oocysts, 3 log inactivation credits for Giardia cysts, and 2 log inactivation credits for viruses when a dosage of 40 mJ/cm <sup>2</sup> is achieved and the uv units are operating and maintained in accordance with Schedule E of the Licence.<br><br>A review of the continuous monitoring trends for flow, UV dosage, UVT, off-specification reports, and elogbooks indicates that primary disinfection was achieved for the inspection period. |             |               |             |

| Question ID                                                              | DWMR1026001 | Question Type | Legislative |
|--------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-6   (2); |             |               |             |

**Question:**

If primary disinfection equipment did not use chlorination or chloramination, was the equipment equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 1-6 of O. Reg. 170/03?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**

Primary disinfection equipment was equipped with alarms or shutoff mechanisms that satisfied the standards.

Section 1-6 of Schedule 1 of O. Reg. 170/03 states that, if primary disinfection equipment that does not use chlorination or chloramination is provided by a drinking water system, the owner of the system and the operating authority for the system shall ensure that:

(a) the disinfection equipment has a feature that ensures that no water is directed to users of water treated by the equipment in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection; and

(b) if the disinfection equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection, a certified operator or emergency substitute operator takes appropriate action at the location where the equipment is installed before water is again directed to users of water treated by the equipment.

The Mattawa WTP Alarm setpoint sheet lists a low UV #1 and UV #2 intensity alarm set point of 48 mJ/cm<sup>2</sup>, with a 60 second delay, that will trigger an interlock and low lift pump shutdown.

There is a low UV Transmittance (manual mode) alarm if the UVT drops below 95% which triggers a plant interlock and low lift pump shut down.

| Question ID                                                                                                                                                                                                                                                                                  | DWMR1027001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                                                                                                       |             |               |             |
| <b>Question:</b><br>Did the owner have evidence indicating that chemicals and materials that came in contact with water within the drinking water system met all applicable AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner had evidence indicating that chemicals and materials that came in contact with water within the drinking water system met the applicable standards.                                                          |             |               |             |

| Question ID                                                              | DWMR1024001 | Question Type | Legislative |
|--------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-2   (2); |             |               |             |

**Question:**

Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection 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 was operated as required.

Section 1-2(2) of Schedule 2 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system shall ensure that, if the drinking water system's water treatment equipment provides chlorination for secondary disinfection, the equipment is operated so that, at all times and at all locations within the distribution system, the free chlorine residual is never less than 0.05 mg/L.

A review of the Mattawa Distribution System Chlorine Monitoring sheets for the inspection period indicates that the minimum chlorine residual was measured on April 16th, 2024 at 0.25 mg/L.

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DWMR1033001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   7-2   (3); SDWA   O. Reg. 170/03   7-2   (4);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |               |             |
| <b>Question:</b><br>Was secondary disinfectant residual tested as required for the large municipal residential distribution system?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Secondary disinfectant residual was not tested as required for the large municipal residential distribution system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |             |
| <b>REQUIRED ACTIONS:</b><br><br>A review of the Mattawa Distribution System Chlorine Monitoring sheets for the inspection period indicates that a set of four chlorine residuals were taken on October 29th, 2024. However, a second set of three chlorine residuals were not taken during the week (at least 48 hours apart) as required.<br><br>The operator indicated that the samples were taken during the week but were not recorded on the distribution residual sheet.<br><br>The operating authority indicated that the distribution system residual sheets will be reviewed monthly to ensure that the distribution system chlorine residuals are taken twice each week and recorded as required. |             |               |             |
| <b>DETAILS:</b><br><br>Section 7-2(3) and (4) of Schedule 7 of O. Reg. 170/03 requires that the owner and operating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |               |             |

authority of a large municipal residential system that provides secondary disinfection shall ensure that at least seven distribution samples are taken each week. At least four of the samples must be taken on one day of the week and at least 48 hours later, three samples must be taken on the second day of the week.

A review of the Mattawa Distribution System Chlorine Monitoring sheets for the inspection period indicates that a set of four chlorine residuals were taken on October 29th, 2024. However, a second set of three chlorine residuals were not taken during the week (at least 48 hours apart) as required.

The operator indicated that the samples were taken during the week but were not recorded on the distribution residual sheet.

Failure to ensure that at least seven distribution samples are taken each week during the week of October 28th, 2024 is a violation of Section 7-2(3) and (4) of Schedule 7 of O. Reg. 170/03.

| Question ID                                                                                                                                                                                             | DWMR1049001 | Question Type | BMP |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                    |             |               |     |
| <b>Question:</b><br>Did records confirm that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system?                                                 |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Records confirmed that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system. |             |               |     |

| Question ID                                                                                                                                                                                                                                   | DWMR1036001 | Question Type | Legislative |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-7   (1);                                                                                                                                                                      |             |               |             |
| <b>Question:</b><br>Where continuous monitoring equipment was not used for chlorine residual analysis, were samples tested using an acceptable portable device?                                                                               |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Samples for chlorine residual analysis were tested using an acceptable portable device.<br><br>A HACH Pocket Colorimeter II is used to measure free chlorine residuals. |             |               |             |

| Question ID                                                                                                                                                                                        | DWMR1031001 | Question Type | BMP |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                               |             |               |     |
| <b>Question:</b><br>Were operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?                                                   |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system. |             |               |     |

| Question ID                                                                                                                                    | DWMR1035001 | Question Type | Legislative |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-5   (1)1-4;                                                                    |             |               |             |
| <b>Question:</b><br>Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Operators were examining continuous monitoring test results as required. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | DWMR1039001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-6   (3);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |               |             |
| <b>Question:</b><br>If primary disinfection equipment that does not use chlorination or chloramination was used, did the owner and operating authority ensure the equipment had a recording device that continuously recorded the performance of the disinfection equipment?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment.<br><br>Section 1-6(3) of Schedule 1 of O. Reg. 170/03 specifies that if primary disinfection equipment that does not use chlorination or chloramination is provided by a large municipal residential system, the owner and operating authority of the system must ensure that the disinfection equipment has a recorded device that continuously records the performance of the disinfection equipment.<br><br>Condition 1.6.2 of Schedule C of the Licence specifies that the Mattawa WTP's ultraviolet light disinfection equipment must test for calculated UV dose, flow rate, UV transmittance, |             |               |             |

and the UV lamp status at a testing frequency of every five (5) minutes or less and record the test data at a recording frequency of every four (4) hours or less.

Performance of the disinfection equipment is continuously monitored and recorded using a SCADA system and data logger.

The SCADA system records and continuously monitors the calculated UV dose and flow rate (including UV lamp status). UV transmittance is tested by Optiview, and online UVT analyzer, and is recorded on SCADA.

A review of the continuous trends on SCADA and Wonderware for the Mattawa WTP indicates that the calculated UV dose, flow rate, UV transmittance was continuously recorded as required for the inspection period.

| Question ID                                                                                                                                                                                                                                                                                                                                        | DWMR1109001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-6   (1); SDWA   O. Reg. 170/03   1-6   (2);                                                                                                                                                                                                                                        |             |               |             |
| <b>Question:</b><br>If the system used equipment for primary disinfection other than chlorination or chloramination and the equipment malfunctioned, lost power, or ceased to provide the appropriate level of disinfection, causing an alarm or an automatic shut-off, did a certified operator respond as required and take appropriate actions? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>A certified operator responded as required and took appropriate actions.                                                                                                                                                                                                     |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                            | DWMR1042001 | Question Type | Legislative |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                                                                                                                                                                                                                 |             |               |             |
| <b>Question:</b><br>If UV disinfection was used, were duty sensors and reference UV sensors checked and calibrated as per the requirements of Schedule E of the Municipal Drinking Water Licence or at a frequency as otherwise recommended by the UV equipment manufacturer?                                                                                          |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>All UV sensors were checked and calibrated as required.<br><br>Schedule E of the Licence requires the Duty UV Sensor to be checked at least monthly against a reference UV sensor or as recommended by the manufacturer, and;<br><br>- The calibration ratio shall be less than or equal to 1.2; |             |               |             |

- If the calibration ratio is greater than 1.2, the duty UV sensor shall be replaced with a calibrated UV sensor or correction factor shall be applied while the problem is being resolved;

- Reference UV sensors shall be checked against a Master Reference Assembly at a minimum frequency of once every three years or on a more frequent basis depending upon the recommendations of the equipment manufacturer.

A review of the UV Reference Check Readings for 2024 indicate that UV#1 and UV#2 were verified against a reference UV sensor monthly.

However, the date the sensors were verified was not recorded on the reference sheet, elogbooks or workorder summary for 2024: May, June, July, August, October, November or January 2025.

Note: The UV Reference Check Readings provided on January 30th, 2025 indicate the date of "2025".

The operating authority indicated that the Reference UV sensors are sent out annually (alternating) to be checked against a Master Reference Assembly.

| Question ID                                                                                                                                                          | DWMR1099001 | Question Type | Information |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                 |             |               |             |
| <b>Question:</b><br>Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?                               |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Records showed that all water sample results met the Ontario Drinking Water Quality Standards. |             |               |             |

| Question ID                                                                                                                                                         | DWMR1079001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   10-4   (1); SDWA   O. Reg. 170/03   10-4   (2); SDWA   O. Reg. 170/03   10-4   (3);                   |             |               |             |
| <b>Question:</b><br>Were raw water microbiological sampling requirements prescribed by Schedule 10-4 of O. Reg. 170/03 for large municipal residential systems met? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Raw water microbiological sampling requirements were met.                                     |             |               |             |

Section 10-4 of Schedule 10 of O. Reg. 170/03 require that the owner and operating authority for the drinking water system, that obtains water from a raw water supply that is ground water, must ensure that a sample is taken at least weekly from each well in the system and tested for E.coli and total coliform.

A review of the certificates of analysis for the inspection period indicates that raw water samples were taken weekly from both Well No. 1 and Well No. 2 and were tested for E.coli and total coliforms.

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DWMR1083001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   10-3;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |               |             |
| <b>Question:</b><br>Were treated microbiological sampling requirements prescribed by Schedule 10-3 of O. Reg. 170/03 for large municipal residential systems met?                                                                                                                                                                                                                                                                                                                                                                                                         |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Treated microbiological sampling requirements were met.<br><br>Section 10-3 of Schedule 10 of O. Reg. 170/03 require the owner and operating authority of the drinking water system must ensure that a treated water sample is taken at least once every week and tested for E.coli, total coliforms, and HPC.<br><br>A review of the certificates of analysis for the inspection period indicates that a treated water sample was taken each week and tested for E.coli, total coliforms, and HPC. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DWMR1081001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   10-2   (1); SDWA   O. Reg. 170/03   10-2   (2); SDWA   O. Reg. 170/03   10-2   (3);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |             |
| <b>Question:</b><br>Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Distribution microbiological sampling requirements were met.<br><br>Section 10-2 of Schedule 10 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system must ensure that at least ten distribution samples are taken every month, with at least one of the samples being taken each week. The owner and operating authority must ensure that each of the samples are tested for E.coli, total coliforms, and that at least 25% of the samples are tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC).<br><br>A review of the certificates of analysis for the inspection period indicates that three distribution |             |               |             |

system samples were taken each week and tested for E.coli, total coliforms, and at least one of these samples were also tested for HPC.

| Question ID                                                                                                                                      | DWMR1096001 | Question Type | Legislative |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-3   (1);                                                                         |             |               |             |
| <b>Question:</b><br>Did records confirm that chlorine residual tests were conducted at the same time and location as microbiological samples?    |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Records confirmed that chlorine residual tests were conducted as required. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DWMR1084001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-2;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |               |             |
| <b>Question:</b><br>Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Inorganic parameter sampling requirements were met.<br><br>Section 13-2 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority for the drinking water system must ensure that at least one treated water sample is taken every 36 months from a ground water source and tested for every parameter in Schedule 23 (Inorganics).<br><br>A review of the certificates of analysis for the inspection period indicates that treated water samples were taken on October 10th, 2024 and tested for every parameter in Schedule 23 (Inorganics).<br><br>The next sample is required by October 10th, 2027 (+/- 60 days). |             |               |             |

| Question ID                                                                                                                                       | DWMR1085001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-4   (1); SDWA   O. Reg. 170/03   13-4   (2); SDWA   O. Reg. 170/03   13-4   (3); |             |               |             |
| <b>Question:</b><br>Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?                               |             |               |             |

**Compliance Response(s)/Corrective Action(s)/Observation(s):**

Organic parameter sampling requirements were met.

Section 13-4 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority for the drinking water system must ensure that at least one treated water sample is taken every 36 months from a ground water source and tested for every parameter in Schedule 24 (Organics).

A review of the certificates of analysis for the inspection period indicates that treated water samples were taken on October 10th, 2024 and tested for every parameter in Schedule 24 (Organics).

The next sample is required by October 10th, 2027 (+/- 60 days).

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                    | DWMR1086001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b>                                                                                                                                                                                                                                                                                                                                                                             |             |               |             |
| 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);                                                                                                                                                                            |             |               |             |
| <b>Question:</b>                                                                                                                                                                                                                                                                                                                                                                                               |             |               |             |
| Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?                                                                                                                                                                                                                                                                                                                  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b>                                                                                                                                                                                                                                                                                                                                             |             |               |             |
| Haloacetic acid sampling requirements were met.                                                                                                                                                                                                                                                                                                                                                                |             |               |             |
| Section 13-6.1 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for a drinking water system that provides chlorination must ensure that at least one distribution sample is taken in each calendar quarter, from a point in the distribution system, that is likely to have an elevated potential for the formation of haloacetic acids and tested for haloacetic acids (HAA). |             |               |             |
| On January 1, 2020, Ontario Drinking Water Quality Standards Regulation O. Reg. 169/03 standard for HAA (80 µg/L) came into effect and is expressed as a RAA, where RAA is defined as "the running annual average of quarterly results" for HAA for a drinking water system.                                                                                                                                   |             |               |             |
| A review of the certificates of analysis for the inspection period indicates that HAAs were tested on January 30th, 2024 (< 5.3 µg/L), April 10th, 2024 (< 5.3 µg/L), July 10th, 2024 (< 5.3 µg/L), October 10th, 2024 (< 5.3 µg/L).                                                                                                                                                                           |             |               |             |
| The current RAA for HAAs is <5.3 µg/L.                                                                                                                                                                                                                                                                                                                                                                         |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DWMR1087001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>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);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |               |             |
| <b>Question:</b><br>Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Trihalomethane sampling requirements were met.<br><br>Section 13-6 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of the drinking water system that provides chlorination must ensure that at least one distribution sample is taken in each calendar quarter from a point in the distribution system that is likely to have an elevated potential for the formation of trihalomethanes and tested for trihalomethanes (THMs).<br><br>O. Reg. 169/03 sets the standard for THMs as 0.1 mg/L (100 ug/L) expressed as a RAA. RAA is defined as "the running annual average of quarterly results".<br><br>O. Reg. 170/03 defines the "calendar quarter" as the three-month period that begins on January 1, April 1, July 1, or October 1.<br><br>A review of the certificates of analysis for the inspection period indicates that THMs were tested on January 30th, 2024 (3.5 µg/L), April 10th, 2024 (3.2 µg/L), July 24th, 2024 (5 µg/L), October 10th, 2024 (4.4 µg/L).<br><br>The current RAA for THMs is 4 µg/L. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DWMR1088001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-7;                                                                                                                                                                                                                                                                                                                                                                                                       |             |               |             |
| <b>Question:</b><br>Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03 met?                                                                                                                                                                                                                                                                                                                                                         |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Nitrate/nitrite sampling requirements were met.<br><br>Section 13-7 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system must ensure that at least one water sample is taken every three months and tested for nitrate and nitrite.<br><br>A review of the certificates of analysis for the inspection period indicates that sampling for |             |               |             |

nitrate and nitrites occurred on April 10th, 2024, July 10th, 2024, and October 10th, 2024.

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DWMR1089001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-8;                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |             |
| <b>Question:</b><br>Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?                                                                                                                                                                                                                                                                                                                                                                                              |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Sodium sampling requirements were met.<br><br>Section 13-8 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority for the drinking water system must ensure that at least one treated water sample is taken every 60 months and tested for sodium.<br><br>The most recent sodium sample was collected on January 24th, 2023 at 14.4 mg/L. The next sample is required by January 24th, 2028 (+/- 90 days). |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | DWMR1090001 | Question Type | Legislative |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-9;                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |               |             |
| <b>Question:</b><br>Where fluoridation is not practiced, were fluoride sampling requirements prescribed by Schedule 13-9 of O. Reg. 170/03 met?                                                                                                                                                                                                                                                                                                                                                                    |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Fluoride sampling requirements were met.<br><br>Section 13-9 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system must ensure that at least one treated water sample is taken every 60 months and tested for fluoride.<br><br>The most recent fluoride sample was collected on February 15th, 2023 at <0.1 mg/L. The next sample is required by February 15th, 2028 (+/- 90 days). |             |               |             |

| Question ID                                                                                                                | DWMR1092001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-2;                                                         |             |               |             |
| <b>Question:</b><br>Were water samples taken at the prescribed location?                                                   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Water samples were taken at the prescribed location. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DWMR1095001 | Question Type | Legislative |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>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   (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);                                                               |             |               |             |
| <b>Question:</b><br>Were lead sampling requirements prescribed by Schedule 15.1 of O. Reg. 170/03 met?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Lead sampling requirements were met.<br><br>Community lead sampling and testing in the Mattawa Drinking Water System has been previously conducted in accordance with the requirements of Section 15.1-5 of Schedule 15.1 to O. Reg.170/03. The system qualified for exemption from the monitoring of lead in plumbing effective 2012. Systems that are exempt from testing for lead in plumbing under Section 15.1-5(9) of Schedule 15.1 of O. Reg. 170/03 require the ongoing testing of total alkalinity and pH in the distribution system during the periods of December 15 to April 15 (winter period) and June 15 to October 15 (summer period) in every 12-month period and testing for lead in the distribution system during the winter and summer periods in every third 12-month period.<br><br>A review of the certificates of analysis and ministry records indicates that samples were collected at two locations in the Mattawa Distribution System and tested for lead, alkalinity, and pH on April 10th, 2024 and October 10th, 2024. |             |               |             |

| Question ID                                                                                                                                                                                  | DWMR1097001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   7-3   (1.1);                                                                                                                   |             |               |             |
| <b>Question:</b><br>If the drinking water system obtained water from a ground water source, was turbidity tested at least once every month from each well that supplied water to the system? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Turbidity was not tested at least once every month from each well that supplied water to the system.                   |             |               |             |

**REQUIRED ACTIONS:**

The owner and operating authority shall ensure that monthly raw water samples taken from each well and tested for turbidity are taken at least 20 days apart, and not more than 40 days, after a previous sample was taken.

**DETAILS:**

Section 7-3(1.1) of Schedule 7 of O. Reg. 170/03 specifies that, if the drinking water system obtains water from a raw water supply that is ground water, the owner and operating authority for the system shall ensure that a sample is taken at least once every month from each well and test for turbidity.

Section 6-1.1(3) of Schedule 6 of O. Reg. 170/03 specifies that if O. Reg. 170/03 requires at least one water sample to be taken every month and tested for a parameter, the owner and operating authority of the drinking water system shall ensure that at least one sample is taken at least 20 days, and not more than 40 days, after a previous sample was taken.

A review of the Monthly Well Turbidity Summary sheet for the inspection period indicates that at least one sample was taken each month from each well and tested for turbidity. However, the turbidity samples taken on October 2nd, 2024 and November 13th, 2024 were taken outside of the sampling frequency; 42 days apart.

Failure to ensure that a raw water sample was taken from each well and tested for turbidity monthly is a violation of Section 7-3(1.1) of Schedule 7 and Section 6-1.1(3) of Schedule 6 of O. Reg. 170/03.

| Question ID                                                                                                                            | DWMR1110001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   11   (6);                                                                |             |               |             |
| <b>Question:</b><br>Was the annual report prepared by February 28th of the following year and did it contain the required information? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The annual report requirements were met.                         |             |               |             |

| Question ID                                                                                                                                                                           | DWMR1111001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>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); |             |               |             |
| <b>Question:</b><br>Did the summary report contain the required information and was it completed and distributed                                                                      |             |               |             |

as required?

**Compliance Response(s)/Corrective Action(s)/Observation(s):**

The summary report requirements were met.

| Question ID                                                                                                                                 | DWMR1098001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13   (1); SDWA   O. Reg. 170/03   13   (2); SDWA   O. Reg. 170/03   13   (3); |             |               |             |
| <b>Question:</b><br>Were the required records kept for the periods prescribed by section 13 of O. Reg. 170/03?                              |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The required records were kept for the prescribed periods.            |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DWMR1046001 | Question Type | BMP |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |               |     |
| <b>Question:</b><br>Was there a backflow prevention program, policy and/or bylaw in place that addressed cross connections and connections to high hazard facilities?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>There was no backflow prevention program, policy and/or bylaw in place.<br><br>RECOMMENDATIONS:<br><br>It is recommended as a best management practice that the owner develop a backflow prevention program, policy, or bylaw to address cross connections and connections to high hazard facilities. The ministry's Backflow Prevention Guide (found at: <a href="https://www.ontario.ca/page/guide-drinking-water-system-owners-seeking-undertake-backflow-prevention-program">https://www.ontario.ca/page/guide-drinking-water-system-owners-seeking-undertake-backflow-prevention-program</a> ) should be used as a reference in developing the backflow prevention program.<br><br>DETAILS:<br><br>There is no backflow prevention program, policy or bylaw in place to address cross connections and connections to high hazard facilities. |             |               |     |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DWMR1053001 | Question Type | BMP |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |               |     |
| <b>Question:</b><br>Was the owner able to maintain proper pressures in the distribution system and was pressure monitored to alert the operator of conditions of loss of pressure below the value under which the system was designed to operate?                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>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.<br><br>The Mattawa WTP Alarm setpoint lists a low distribution pressure alarm set at less than 70 psi.<br><br>A review of the elogbooks for the inspection period indicate that, on June 24th, 2024, the operator found the plant not running and the reservoir was low. Distribution pressure was at 40 psi. No alarms called out due to Telus issues. The operator restored the plant. |             |               |     |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                            | DWMR1047001 | Question Type | BMP |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                                                                                                                   |             |               |     |
| <b>Question:</b><br>Did 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?                                                                                                                                                                                                      |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>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.<br><br>The Mattawa Reservoir is inspected, cleaned and maintained every 10 years. A structural review of the Mattawa Reservoir was conducted in 2018. |             |               |     |

| Question ID                                                                                                                                                                                       | DWMR1048001 | Question Type | BMP |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                              |             |               |     |
| <b>Question:</b><br>Had the owner implemented a program for the flushing of watermain as per industry standards?                                                                                  |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner had implemented a program for the flushing of watermain.<br><br>The watermain are flushed every year in the fall. |             |               |     |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DWMR1050001 | Question Type | BMP |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |               |     |
| <b>Question:</b><br>Was there a program in place for inspecting and exercising valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>There was no program in place for inspecting and exercising valves.<br><br>RECOMMENDATION:<br><br>It is recommended, as a best management practice, that the owner develop and implement a program for inspecting and exercising valves based on the AWWA Standard G200-15 Distribution System Operation and Management.<br><br>The AWWA Standard identifies the following minimum requirements for a valve exercising program including:<br><br>1) A goal for the number of transmission valves to be exercised annually based on the percentage of the total valves in the system;<br><br>2) A goal for the number of distribution valves to be exercised annually;<br><br>3) Measures to verify that the goals are met and written procedures for action if the goals are not attained;<br><br>4) Identification of critical valves in the distribution system exercising on a regular basis;<br><br>5) Recognition of potential quality and isolation concerns;<br><br>6) Tracking of annual results and set goals to reduce the percent of inoperable valves. |             |               |     |

| Question ID                                                                                                                                                                                                                                 | DWMR1051000 | Question Type | BMP |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                        |             |               |     |
| <b>Question:</b><br>Is there a program in place for inspecting and operating hydrants?                                                                                                                                                      |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>There was a program in place for inspecting and operating hydrants.<br><br>Hydrants are inspected and operated while flushing the distribution system each year and a |             |               |     |

hydrant service form is completed.

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DWMR1052001 | Question Type | BMP |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |               |     |
| <b>Question:</b><br>Was there a bylaw or policy in place limiting access to hydrants?                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>There was a bylaw or policy in place limiting access to hydrants.<br><br>The Corporation of the Town of Mattawa issued the by-law to regulate the use of fire hydrants and the water distribution system on September 14th, 2020. The by-law restricts access to the volunteer fire department, Certified Operators with a Class II Water Distribution and Supply Subsystem licence, or authorization from the Public Works Supervisor and/or the Fire Chief. |             |               |     |

| Question ID                                                                                                                                                       | DWMR1058001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   28;                                                                                                 |             |               |             |
| <b>Question:</b><br>Did operators and maintenance personnel have ready access to operations and maintenance manuals?                                              |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Operators and maintenance personnel had ready access to operations and maintenance manuals. |             |               |             |

| Question ID                                                                                                                                                                                                                     | DWMR1059001 | Question Type | Legislative |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   28;                                                                                                                                                               |             |               |             |
| <b>Question:</b><br>Did the operations and maintenance manuals contain plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system?                                                 |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The operations and maintenance manuals contained plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system. |             |               |             |

| Question ID                                                                                                                                                                  | DWMR1060001 | Question Type | Legislative |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);                                                                                                                       |             |               |             |
| <b>Question:</b><br>Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?                                              |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence. |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                   | DWMR1064001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   26   (2);                                                                                                                                                                                                                                                                                                       |             |               |             |
| <b>Question:</b><br>Did an operator-in-charge ensure that records were maintained of all adjustments to the processes within their responsibility?                                                                                                                                                                                                                            |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The operator-in-charge did not ensure that records were maintained of all adjustments to the processes within their responsibility.                                                                                                                                                                     |             |               |             |
| REQUIRED ACTIONS:                                                                                                                                                                                                                                                                                                                                                             |             |               |             |
| The owner and operating authority shall ensure that the date is recorded on the UV Reference Check Readings sheet.                                                                                                                                                                                                                                                            |             |               |             |
| By no later than June 30th, 2025, the owner and operating authority shall provide to Water Compliance Officer Erin Spires (Ministry of the Environment, Conservation, and Parks' North Bay Office) a copy of the UV Reference Check Readings sheet from January to June 2025.                                                                                                 |             |               |             |
| DETAILS:                                                                                                                                                                                                                                                                                                                                                                      |             |               |             |
| Section 27(5)6. of O. Reg. 128/03 requires that an operator-in-charge or a person authorized by an operator-in-charge shall record any equipment that was taken out of service or ceased to operate during the shift and any action taken to maintain or repair equipment during the shift in the logs or other record-keeping mechanisms in respect of each operating shift. |             |               |             |
| A review of the elogbooks, UV Reference Check sheets, and Work Order Summary indicate that the date the UV sensor reference checks were not recorded in 2024 for May, June, July, August, October, November and January 2025.                                                                                                                                                 |             |               |             |
| Failure to ensure that an operator-in-charge or a person authorized by an operator-in-charge to record when the UV units were taken out of service and verified as part of maintenance                                                                                                                                                                                        |             |               |             |

during the shift in the logs or other records is a violation of Section 27(5)6. of O. Reg. 128/03.

| Question ID                                                                                                                                                                                                                                                                                                                         | DWMR1062001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   7-5;                                                                                                                                                                                                                                                                  |             |               |             |
| <b>Question:</b><br>Did records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03?                                                 |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03. |             |               |             |

| Question ID                                                                                                                                                             | DWMR1063001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-10   (1);                                                                                               |             |               |             |
| <b>Question:</b><br>For every required operational test and sample, was a record made of the date, time, location, results, and name of the person conducting the test? |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>For every required operational test and sample, a record was made as required.                    |             |               |             |

| Question ID                                                                                                                                                                                                                                                                                                                                                                                                             | DWMR1061001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>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);                                                                                                                                     |             |               |             |
| <b>Question:</b><br>Were logbooks properly maintained and did they contain the required information?                                                                                                                                                                                                                                                                                                                    |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Logbooks were properly maintained and contained the required information.<br><br>A review of the elogbooks for the inspection period indicates that occasionally the logbook entry was made after the operator was onsite. Entries and discussions with OCWA indicate that there were technical issues with the elogbook app uploading the entry. |             |               |             |

| Question ID                                                                                                                                               | DWMR1065001 | Question Type | Legislative |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   27   (6);                                                                                   |             |               |             |
| <b>Question:</b><br>Were logs and other record keeping mechanisms available for at least five (5) years?                                                  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Logs or other record keeping mechanisms were available for at least five (5) years. |             |               |             |

| Question ID                                                                                                                                                     | DWMR1066001 | Question Type | BMP |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                            |             |               |     |
| <b>Question:</b><br>Was spill containment provided for process chemicals and standby power generator fuel?                                                      |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Spill containment was provided for process chemicals and/or standby power generator fuel. |             |               |     |

| Question ID                                                                                                                             | DWMR1067001 | Question Type | BMP |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                    |             |               |     |
| <b>Question:</b><br>Were equipment and materials in place for the clean up of spills?                                                   |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Equipment and materials were in place for the clean up of spills. |             |               |     |

| Question ID                                                                                                                              | DWMR1068001 | Question Type | BMP |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                     |             |               |     |
| <b>Question:</b><br>If available, were standby power generators tested under normal load conditions?                                     |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Standby power generators were tested under normal load conditions. |             |               |     |
| A review of the Workorder Summary Report and elogbooks for the inspection period indicates                                               |             |               |     |

that the standby power generator was tested or running under normal load conditions in 2024: March, May, July, August, September, October, November and January 2025.

Annual maintenance was performed on October 15th and 24th, 2024 and the generator was repaired on November 5th, 2024.

| Question ID                                                                                                                                                                                                                                                                                                                            | DWMR1069001 | Question Type | BMP |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                                                   |             |               |     |
| <b>Question:</b><br>Were all storage facilities completely covered and secure?                                                                                                                                                                                                                                                         |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Storage facilities were completely covered and secure.<br><br>The Mattawa Reservoir is kept secured and is covered.<br><br>Note: The Mattawa Reservoir was inaccessible during the inspection and a site visit will occur at a later date when the road is open. |             |               |     |

| Question ID                                                                                                                                                                                                                                                                                                                       | DWMR1070001 | Question Type | BMP |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                                              |             |               |     |
| <b>Question:</b><br>Were air vents and overflows associated with reservoirs and elevated storage structures equipped with screens?                                                                                                                                                                                                |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Air vents and overflows associated with reservoirs and elevated storage structures were equipped with screens.<br><br>Note: The Mattawa Reservoir was inaccessible during the inspection and a site visit will occur at a later date when the road is open. |             |               |     |

| Question ID                                                                                                                                                    | DWMR1071001 | Question Type | BMP |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                           |             |               |     |
| <b>Question:</b><br>Did the owner provide security measures to protect components of the drinking water system?                                                |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner provided security measures to protect components of the drinking water system. |             |               |     |

The Mattawa Water Treatment Plant is completely fenced and the gate is kept locked. The building is equipped with an intruder alarm and the door is kept locked when operators are not onsite.

The Mattawa Reservoir is fenced in and the gate is kept locked. There is also an intruder alarm.

| Question ID                                                                                                                                                                                                                                                                                                        | DWMR1072001 | Question Type | BMP |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-----|
| <b>Legislative Requirement(s):</b><br>Not Applicable                                                                                                                                                                                                                                                               |             |               |     |
| <b>Question:</b><br>Had the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in the drinking water system?                                                                                                                                                |             |               |     |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system.<br><br>By-law No. 09-06, signed on January 26th, 2009, is in effect to conserve water used for watering lawns. |             |               |     |

| Question ID                                                                                                                                                                                                                                                                                                                      | DWMR1073001 | Question Type | Legislative |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   23   (1);                                                                                                                                                                                                                                                          |             |               |             |
| <b>Question:</b><br>Was an overall responsible operator designated for all subsystems which comprise the drinking water system?                                                                                                                                                                                                  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>An overall responsible operator was designated for all subsystem.<br><br>Josh DeWaal and Curtis Green alternate acting as overall responsible operator every three weeks. Monique Malette also alternated as overall responsible operator until July 2024. |             |               |             |

| Question ID                                                                                                                   | DWMR1074001 | Question Type | Legislative |
|-------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   25   (1);                                                       |             |               |             |
| <b>Question:</b><br>Were operators-in-charge designated for all subsystems which comprise the drinking water system?          |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Operators-in-charge were designated for all subsystems. |             |               |             |

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| Question ID                                                                                                     | DWMR1075001 | Question Type | Legislative |
|-----------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   22;                                               |             |               |             |
| <b>Question:</b><br>Were all operators certified as required?                                                   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>All operators were certified as required. |             |               |             |

| Question ID                                                                                                                                         | DWMR1076001 | Question Type | Legislative |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-2   (2);                                                                            |             |               |             |
| <b>Question:</b><br>Were adjustments to the treatment equipment only made by certified operators?                                                   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Adjustments to the treatment equipment were only made by certified operators. |             |               |             |

## Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2024-25)

**DWS Name:** MATTAWA DRINKING WATER SYSTEM

**DWS Number:** 210001905

**DWS Owner:** MATTAWA MUNICIPAL CORPORATION

**Municipal Location:** MATTAWA

Regulation: O.REG. 170/03

**DWS Category:** DW Municipal Residential

Type of Inspection: Detailed

**Compliance Assessment Start Date:** Jan-23-2025

**Ministry Office:** North Bay Area Office

**Maximum Risk Rating: 509**

| Inspection Module              | Non Compliance Risk (X out of Y) |
|--------------------------------|----------------------------------|
| Capacity Assessment            | 0/38                             |
| Certification and Training     | 0/42                             |
| Logbooks                       | 4/30                             |
| Operations Manuals             | 0/42                             |
| Reporting & Corrective Actions | 0/29                             |
| Source                         | 0/26                             |
| Treatment Processes            | 21/158                           |
| Water Quality Monitoring       | 8/144                            |
| Overall - Calculated           | 33/509                           |

|                                |              |
|--------------------------------|--------------|
| <b>Inspection Risk Rating:</b> | <b>6.48%</b> |
|--------------------------------|--------------|

|                                 |               |
|---------------------------------|---------------|
| <b>Final Inspection Rating:</b> | <b>93.52%</b> |
|---------------------------------|---------------|

Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2024-25)

|                                          |                               |
|------------------------------------------|-------------------------------|
| <b>DWS Name:</b>                         | MATTAWA DRINKING WATER SYSTEM |
| <b>DWS Number:</b>                       | 210001905                     |
| <b>DWS Owner Name:</b>                   | MATTAWA MUNICIPAL CORPORATION |
| <b>Municipal Location:</b>               | MATTAWA                       |
| <b>Regulation:</b>                       | O.REG. 170/03                 |
| <b>DWS Category:</b>                     | DW Municipal Residential      |
| <b>Type of Inspection:</b>               | Detailed                      |
| <b>Compliance Assessment Start Date:</b> | Jan-23-2025                   |
| <b>Ministry Office:</b>                  | North Bay Area Office         |

| Non-Compliance Question(s)                                                                                                                                               | Non Compliance Risk |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>Logbooks</b>                                                                                                                                                          |                     |
| Did an operator-in-charge ensure that records were maintained of all adjustments to the processes within their responsibility?                                           | 4                   |
| <b>Treatment Processes</b>                                                                                                                                               |                     |
| Was secondary disinfectant residual tested as required for the large municipal residential distribution system?                                                          | 21                  |
| <b>Water Quality Monitoring</b>                                                                                                                                          |                     |
| If the drinking water system obtained water from a ground water source, was turbidity tested at least once every month from each well that supplied water to the system? | 8                   |
| <b>Overall - Total</b>                                                                                                                                                   | <b>33</b>           |

Maximum Question Rating: 509

|                                |              |
|--------------------------------|--------------|
| <b>Inspection Risk Rating:</b> | <b>6.48%</b> |
|--------------------------------|--------------|

|                                 |               |
|---------------------------------|---------------|
| <b>FINAL INSPECTION RATING:</b> | <b>93.52%</b> |
|---------------------------------|---------------|

# Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or

[waterforms@ontario.ca](mailto:waterforms@ontario.ca).

For more information on Ontario's drinking water visit

[www.ontario.ca/page/drinking-water](http://www.ontario.ca/page/drinking-water)



## Click on the publication below to access it

- [Drinking Water System Profile Information Form - 012-2149E](#)
- [Laboratory Services Notification Form – 012-2148E](#)
- [Adverse Test Result Notification Form – 012-4444E](#)
- [Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils](#)
- [Procedure for Disinfection of Drinking Water in Ontario](#)
- [Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids](#)
- [Filtration Processes Technical Bulletin](#)
- [Ultraviolet Disinfection Technical Bulletin](#)
- [Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments](#)
- [Certification Guide for Operators and Water Quality Analysts](#)
- [Training Requirements for Drinking Water Operator](#)
- [Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption](#)
- [Drinking Water System Contact List – 7128E01](#)
- [Ontario's Drinking Water Quality Management Standard - Pocket Guide](#)
- [2020 Watermain Disinfection Procedure](#)
- [List of Licensed Laboratories](#)