

**Ministry of the  
Environment,  
Conservation and Parks**  
Eastern Region  
Kingston District Office  
1259 Gardiners Road, Unit 3  
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**Ministère de l'Environnement,  
de la Protection de la nature  
et des Parcs**  
Région de l'Est  
Bureau du district de Kingston  
1259, rue Gardiners, unité 3  
Kingston (Ontario) K7P 3J6



January 10, 2025

**Sent by Email:** [chris.morrison@uclq.on.ca](mailto:chris.morrison@uclq.on.ca)

Chris Morrison,  
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The Corporation of the United Counties of Leeds and Grenville  
25 Central Avenue West, Suite 200  
Brockville, Ontario  
K6V 4N6

**RE: Inspection of The Maples Drinking Water System | Planned Event No. 1-312856469**

Attached to this letter is the report for the recent announced inspection completed at 33 Bennett Street, Spencerville, on November 8, 2024, 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.

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.

Additional findings and applicable comments, where provided, will be found within the report.

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/licensed laboratory inspection results.

If you have questions or concerns, please contact me by email at [nathalie.bennett@ontario.ca](mailto:nathalie.bennett@ontario.ca) or by telephone at (613) 583-6379

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Enclosure (1)

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c: File SI-LG-EC-BE-540 (2024-25)



THE MAPLES DRINKING WATER SYSTEM  
Physical Address: 33 BENNETT ST, ,  
EDWARDSBURGH-CARDINAL,  
ON K0E 1X0

## INSPECTION REPORT

System Number: 260006971  
Entity: UNITED COUNTIES OF LEEDS  
& GRENVILLE  
Inspection Start Date: October 31, 2024  
Site Inspection Date: November 08, 2024  
Inspection End Date: December 06, 2024  
Inspected By: Nathalie Bennett  
Badge #: P1524



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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 section 4 "Systems 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 United Counties of Leeds and Grenville (Owner/Operating Authority) with the essential services provided by the Ontario Clean Water Agency.

The system serves an estimated population of 15 and is categorized as a Small Municipal Residential System. Information reviewed for this inspection covered the time period of September 20, 2023 to November 8, 2024.

Water Compliance Officer Nathalie Bennett, accompanied by Supervisor Mahmud Mahmud and coworker Sarah Young, met with Selena Shane (Process and Compliance Technician), Kurtis Winkenweder (Operations Supervisor), Chris Marchand (Facilities Maintenance Supervisor) on November 8, 2024 as part of the inspection process.

## **Systems/Components**

All locations associated with primary disinfection were visited as part of this inspection. The following site was visited as part of the inspection of the drinking water system:

- 1) Water Treatment Room - 33 Bennett Street, Spencerville, Ontario.

## **Permissions/Approvals**

This 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:

1. Municipal Drinking Water Licence (MDWL), #300-101 Issue #5, dated October 22, 2021;
2. Drinking Water Works Permit (DWWP), #300-201 Issue #4, dated October 22, 2021.
3. Other documents maintained by the O/OA associated with regulatory requirements under the Safe Drinking Water Act.

## **Background and Compliance**

The previous drinking water compliance inspection was conducted on September 25, 2023. It cited no non-compliance or best management practice issues.

**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> DWMR1111001</p> <p>Did the summary report contain the required information and was it completed and distributed as required?</p>	<p>The summary report did not contain the required information, and/or was not completed and distributed as required by Schedule 22-2 of O. Reg. 170/03.</p> <p>The summary report was not given to members of municipal council by the March 31, 2024 deadline but was distributed on April 9, 2024 to the appropriate persons.</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> DWMR1072001</p> <p>Had the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in the drinking water system?</p>	<p>The owner and/or operating authority did not undertake efforts to promote water conservation and/or reduce water losses in their system.</p> <p>Alternate water efficiency measures for consideration include: lawn watering restrictions, encouraging, installation/subsidizing the costs of water efficient fixtures, public education programs, encouraging the use of water efficiency measures at industrial commercial and institutional facilities, metering, and leak detection programs</p>
R-2	<p><b>Question ID:</b> DWMR1010001</p> <p>Were trends in source water quality monitored?</p>	<p>Trends in source water quality were not monitored.</p> <p>As part of a best management practice, drinking water system owners should routinely assess source water quality to ensure that any changes that may lead to treatment issues are addressed.</p>

### 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> SDWA   O. Reg. 170/03   1-2   (1)1;			
<b>Question:</b> 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> 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.  At the time of the inspection, the well cap was secure and the casing was maintained to prevent the entry of surface water and other foreign materials. There were no items stored near the well or other visible sources of contamination that could impact the well.  During the inspection, it was discussed that the Owner/Operating Authority (O/OA) would build up the mounding surrounding the well to maintain adequate surface drainage away from the well.			

Question ID	DWMR1009001	Question Type	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> Measures were in place to protect the groundwater and/or GUDI source.  Section 16.2.8 and 16.2.9, Schedule B of the MDWL requires an inspection schedule and inspection and maintenance procedures for the entire well structure of each well including all above and below grade well components.  The operational manual for the drinking water system states that above ground inspections will occur on a monthly basis and that below grade well inspections will be scheduled and completed at a minimum of once every 10 years.  During the inspection period, the operating authority conducted monthly inspections of the			

above ground well components. The below ground components are checked every ten years with the last below ground inspection of the well occurring on May 21,2019.

Question ID	DWMR1010001	Question Type	BMP
<b>Legislative Requirement(s):</b> Not Applicable			
<b>Question:</b> Were trends in source water quality monitored?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Trends in source water quality were not monitored.  As part of a best management practice, drinking water system owners should routinely assess source water quality to ensure that any changes that may lead to treatment issues are addressed.  O/OA indicated that raw water turbidity tests are conducted monthly, however no mention of the monitoring and trending of the water characteristics was demonstrated.			

Question ID	DWMR1014001	Question Type	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> Flow monitoring was performed as required.  The flow measuring devices were installed and in operation to measure flow rates and volumes of water supplied to the distribution system in accordance with the DWWP and MDWL.  There are two flow meters in the System; one located directly after the water enters the system from the well, and one located at the treated water outlet.			

Question ID	DWMR1015001	Question Type	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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.

As per the manufacturers recommendation the interval to check and calibrate the Carlon Meter is 6 years for the 1" size. This was last completed in February 2022 when the meters were replaced with a factory calibrated meter.

The water meter will be replaced every 6 years to meet the MDWL requirements, and is due to be replaced with a factory calibrated meter by February 2028.

<b>Question ID</b>	DWMR1016001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions.  Section 1.1, Schedule C, of the MDWL provides a rated capacity of 90 m3/day for the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system.  Records were reviewed for the inspection period that showed that the maximum average rated capacity was 3.78 m3/day in February 2024.			

<b>Question ID</b>	DWMR1017001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> Were appropriate records of flows and any capacity exceedances made in accordance with the Municipal Drinking Water Licence?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Appropriate records of flows and any capacity exceedances were made as required.  Schedule C, Condition 2.0 of the MDWL requires that the cumulative and average daily volume of treated water that flows from the treatment subsystem to the distribution system (treated water) and the cumulative and average daily volume of water that flows into the treatment system (raw water) be measured and recorded twice per month.  Documents indicated that measurements were taken twice per month in accordance with the requirements of the MDWL.			

<b>Question ID</b>	DWMR1018001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> The owner ensured that equipment was installed as required.  Visual observations of the System during the physical site inspection were consistent with the equipment description in the DWWP.			

<b>Question ID</b>	DWMR1028001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> Plans for the drinking water system were kept up-to-date and made available as required.			

<b>Question ID</b>	DWMR1023001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   1-2   (2);			
<b>Question:</b> 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> Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed.  The drinking water system is supplied by a secure groundwater source. Treatment at the drinking water system consists of a water softener using potassium chloride, two cartridge filter units (both duty) with 5 micron filters and two Hallett 500pn UV reactors (both duty) each rated to provide a minimum dosage of 40 mJ/cm <sup>2</sup> . Each UV unit is equipped with a UV intensity sensor with audible and visual alarms, solenoid for shutoff, transmittance sensor,			

flow restrictor and an automatic cleaning system.

A review of records indicate that the Solenoid valves were checked monthly. UV bulbs and cartridge filters are at a minimum replaced annually, or as required, and were last replaced September 23, 2024.

Records were reviewed that showed that the treatment equipment was checked every two weeks. There were no alarms during the inspection period.

<b>Question ID</b>	DWMR1026001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   1-6   (2);			
<b>Question:</b> 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?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Primary disinfection equipment was equipped with alarms or shutoff mechanisms that satisfied the standards.  Two Hallet 500 PN model UV units are used for primary disinfection at the drinking water system. Each unit is capable of full treatment for the drinking water system. Each unit is equipped with a UV sensor that monitors UV intensity and dose with visual and audible alarms. A solenoid shutoff is installed for each unit in case of UV equipment malfunction or power failure.			

<b>Question ID</b>	DWMR1027001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> The owner had evidence indicating that chemicals and materials that came in contact with water within the drinking water system met the applicable standards.  Visual inspection confirmed all UV equipment components and filters were NSF certified.			

<b>Question ID</b>	DWMR1031001	<b>Question Type</b>	BMP
<b>Legislative Requirement(s):</b> Not Applicable			

<p><b>Question:</b> Were operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?</p>
<p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.</p>

<b>Question ID</b>	DWMR1039001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   1-6   (3);			
<b>Question:</b> 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> The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment.  The UV equipment continuously monitors UV intensity and UV dose but it does not record these parameters. The operator records the flow rate, intensity and UV lamp status every two weeks when on-site in accordance with the requirement in section 1.6, Schedule C of the MDWL.			

<b>Question ID</b>	DWMR1042001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> All UV sensors were checked and calibrated as required.  The O/A checks the UV units on a bi-weekly basis, which includes checking the sensors and checking the lamp-life hours on each unit. The solenoid is inspected monthly, the UV sensor is calibrated annually, and the UV lamp is replaced annually.			

<b>Question ID</b>	DWMR1099001	<b>Question Type</b>	Information
<b>Legislative Requirement(s):</b> Not Applicable			

<p><b>Question:</b> Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?</p>
<p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Records showed that all water sample results met the Ontario Drinking Water Quality Standards.</p>

Question ID	DWMR1080001	Question Type	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   11-3   (1); SDWA   O. Reg. 170/03   11-3   (3);			
<b>Question:</b> Were raw water microbiological sampling requirements prescribed by Schedule 11-3 of O. Reg. 170/03 for small municipal residential systems met?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Raw water microbiological sampling requirements were met.			
The DWS is required to test one (1) bacteriological sample from raw water every month for Escherichia coli (E. coli), and total coliform (Schedule 11-3). A review of records for the inspection period, showed that samples were collected monthly as required.			

Question ID	DWMR1088001	Question Type	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   13-7;			
<b>Question:</b> 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> Nitrate/nitrite sampling requirements were met.			
During the inspection period, quarterly samples were taken and were analyzed for nitrate/nitrite analysis as required. Nitrate and nitrite results were below the method detection limit for the laboratory at 0.10 mg/L. The O. Reg. 169/03 Ontario Drinking Water Quality Standard (ODWQS) for nitrate is 10 mg/L and the ODWQS for nitrite is 1.0 mg/L.			

Question ID	DWMR1089001	Question Type	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   13-8;			
<b>Question:</b> Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?			

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

Sodium sampling requirements were met.

There was no requirement for sodium testing during this inspection period as the previous sample had been collected October 2021, however a sample for sodium analysis was collected on October 10, 2023 providing a sodium result of 1.0 mg/L, which is below the reportable limit of 20 mg/L. The next sodium sampling date has been scheduled for October 2026, but is now not required until October 2028.

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

<b>Question ID</b>	DWMR1094001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> Were water quality sampling requirements imposed by the Municipal Drinking Water Licence and Drinking Water Works Permit met?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Water quality sampling requirements were met.  The Municipal Drinking Water Licence (MDWL), Schedule D: Conditions for Relief from Regulatory Requirements provides relief from monitoring under Schedule 11 and 13 of O. Reg. 170/03. In lieu of this relief, the MDWL Schedule D outlines the requirement to test one (1) bacteriological sample from plumbing every month for Escherichia Coli, Total Coliform and Heterotrophic Plate Count. (Schedule 11-2). Records indicate sampling occurred as required.			

<b>Question ID</b>	DWMR1097001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   7-3   (1.1);			
<b>Question:</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?			

<p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Turbidity was tested as required.</p>
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<b>Question ID</b>	DWMR1110001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   11   (6);			
<b>Question:</b> 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> The annual report requirements were met.			

<b>Question ID</b>	DWMR1111001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> 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> Did the summary report contain the required information and was it completed and distributed as required?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> The summary report did not contain the required information, and/or was not completed and distributed as required by Schedule 22-2 of O. Reg. 170/03.  The summary report was not given to members of municipal council by the March 31, 2024 deadline but was distributed on April 9, 2024 to the appropriate persons.			

<b>Question ID</b>	DWMR1113001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   10.1   (3);			
<b>Question:</b> Were changes to the system registration information provided to the ministry within ten (10) days of the change?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Changes to the system registration information were provided as required.			

<b>Question ID</b>	DWMR1114001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> Did the owner have evidence that, when required, all legal owners associated with the drinking water system were notified of the requirements of the Municipal Drinking Water Licence and Drinking Water Works Permit?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> The owner had evidence that the required notifications were made.			

<b>Question ID</b>	DWMR1098001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   13   (1); SDWA   O. Reg. 170/03   13   (2); SDWA   O. Reg. 170/03   13   (3);			
<b>Question:</b> 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> The required records were kept for the prescribed periods.  Required records are kept on-site at the drinking water system and at the offices for the Corporation of the United Counties of Leeds and Grenville.			

<b>Question ID</b>	DWMR1058001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 128/04   28;			
<b>Question:</b> Did operators and maintenance personnel have ready access to operations and maintenance manuals?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Operators and maintenance personnel had ready access to operations and maintenance manuals.  Operators have access to a physical and electronic copy of the Operations Manual for the drinking water system.			

<b>Question ID</b>	DWMR1059001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 128/04   28;			

<p><b>Question:</b> Did the operations and maintenance manuals contain plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system?</p>
<p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> The operations and maintenance manuals contained plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system.</p>

<b>Question ID</b>	DWMR1060001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   31   (1);			
<b>Question:</b> 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> The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence.  At the time of the physical site inspection, the Operations and Maintenance Manual contained all of the information required by the MDWL.			

<b>Question ID</b>	DWMR1064001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 128/04   26   (2);			
<b>Question:</b> 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> The operator-in-charge ensured that records were maintained of all adjustments to the processes within their responsibility.			

<b>Question ID</b>	DWMR1062001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   7-5;			
<b>Question:</b> 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?			

<p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> 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.</p> <p>Continuous monitoring equipment is not used at the drinking water system. Operational tests conducted for turbidity and pH testing were conducted by certified operators.</p>
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<b>Question ID</b>	DWMR1063001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 170/03   6-10   (1);			
<b>Question:</b> 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> For every required operational test and sample, a record was made as required.			

<b>Question ID</b>	DWMR1061001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> 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> Were logbooks properly maintained and did they contain the required information?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Logbooks were properly maintained and contained the required information. <p>Logs are maintained in the Operations Manual for the drinking water system, these logs include; Drinking Water System Solenoid Inspection Log, Quarterly Drinking Water System Inspection Log, Annual Drinking Water System Maintenance Log and Flow Monitoring Log. Log sheets included the date, time and name of person entering the information.</p>			

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

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Question ID	DWMR1066001	Question Type	BMP
<b>Legislative Requirement(s):</b> Not Applicable			
<b>Question:</b> Was spill containment provided for process chemicals and standby power generator fuel?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Spill containment was provided for process chemicals and/or standby power generator fuel.  There were no chemicals or fuel storage housed within the building. Fuel storage for the generator is stored in a secure outdoor shed on appropriate spill containment.			

Question ID	DWMR1068001	Question Type	BMP
<b>Legislative Requirement(s):</b> Not Applicable			
<b>Question:</b> If available, were standby power generators tested under normal load conditions?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Standby power generators were tested under normal load conditions.  The OA indicated that the plug-in generator is started up monthly and tested on-load annually. Records were not made available to demonstrate these activities but it is recommended to implement a Generator Testing Log for review at next inspection.			

Question ID	DWMR1071001	Question Type	BMP
<b>Legislative Requirement(s):</b> Not Applicable			
<b>Question:</b> Did the owner provide security measures to protect components of the drinking water system?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> The owner provided security measures to protect components of the drinking water system.  The treatment equipment for the drinking water system is housed within a utility room on the ground floor of the apartment building. Access doors to the utility room are kept locked.			

Question ID	DWMR1072001	Question Type	BMP
<b>Legislative Requirement(s):</b> Not Applicable			

<p><b>Question:</b> Had the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in the drinking water system?</p>
<p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> The owner and/or operating authority did not undertake efforts to promote water conservation and/or reduce water losses in their system.</p> <p>Alternate water efficiency measures for consideration include: lawn watering restrictions, encouraging, installation/subsidizing the costs of water efficient fixtures, public education programs, encouraging the use of water efficiency measures at industrial commercial and institutional facilities, metering, and leak detection programs</p> <p>The O/OA currently only inspects for leaks in the system.</p>

<b>Question ID</b>	DWMMR1073001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 128/04   23   (1);			
<b>Question:</b> 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> An overall responsible operator was designated for all subsystem.			
Mark Lauzon is the designated overall responsible operator for the drinking water system. He is appropriately certified.			

<b>Question ID</b>	DWMMR1078001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 128/04   23   (1); SDWA   O. Reg. 128/04   23   (2); SDWA   O. Reg. 128/04   23   (4); SDWA   O. Reg. 128/04   23   (6); SDWA   O. Reg. 128/04   23   (7);			
<b>Question:</b> When the overall responsible operator was unable to act, was a properly certified operator designated to act in their place?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> A properly certified operator was designated to act in place of the overall responsible operator.			
Mark Lauzon was always able to act. Charles Morrison was the designate in the event that the ORO was unable to act.			

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

<b>Question ID</b>	DWMR1075001	<b>Question Type</b>	Legislative
<b>Legislative Requirement(s):</b> SDWA   O. Reg. 128/04   22;			
<b>Question:</b> Were all operators certified as required?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> All operators were certified as required.  The drinking water system is registered with the ministry as a small municipal residential drinking water system supplied by a secure groundwater source and is considered to be a limited groundwater subsystem.			

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



## INSPECTION RISK RATING REPORT (IRR)

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

<b>DWS Name:</b>	THE MAPLES DRINKING WATER SYSTEM
<b>DWS Number:</b>	260006971
<b>DWS Owner:</b>	UNITED COUNTIES OF LEEDS & GRENVILLE
<b>Municipal Location:</b>	BROCKVILLE
<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>	Oct-31-2024
<b>Ministry Office:</b>	Kingston District Office

Maximum Risk Rating: 319

Inspection Module	Non Compliance Risk (X out of Y)
Capacity Assessment	0/42
Certification and Training	0/49
Logbooks	0/30
Operations Manuals	0/42
Reporting & Corrective Actions	4/16
Source	0/14
Treatment Processes	0/86
Water Quality Monitoring	0/40
<b>Overall - Calculated</b>	<b>4/319</b>

<b>Inspection Risk Rating:</b>	<b>1.25%</b>
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<b>Final Inspection Rating:</b>	<b>98.75%</b>
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Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2024-25)

**DWS Name:** THE MAPLES DRINKING WATER SYSTEM  
**DWS Number:** 260006971  
**DWS Owner Name:** UNITED COUNTIES OF LEEDS & GRENVILLE  
**Municipal Location:** BROCKVILLE

**Regulation:** O.REG. 170/03  
**DWS Category:** DW Municipal Residential  
**Type of Inspection:** Detailed  
**Compliance Assessment Start Date:** Oct-31-2024  
**Ministry Office:** Kingston District Office

Non-Compliance Question(s)	Non Compliance Risk
<b>Reporting &amp; Corrective Actions</b>	
Did the summary report contain the required information and was it completed and distributed as required?	4
<b>Overall - Total</b>	<b>4</b>

Maximum Question Rating: 319

**Inspection Risk Rating: 1.25%**

**FINAL INSPECTION RATING: 98.75%**

# APPLICATION OF THE RISK METHODOLOGY USED FOR MEASURING MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEM INSPECTION RESULTS



The Ministry of the Environment (MOE) has a rigorous and comprehensive inspection program for municipal residential drinking water systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the Safe Drinking Water Act and associated regulations. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

This document describes the risk rating methodology, which has been applied to the findings of the Ministry's MRDWS inspection

results since fiscal year 2008-09. The primary goals of this assessment are to encourage ongoing improvement of these systems and to establish a way to measure this progress.

MOE reviews the risk rating methodology every three years.

The Ministry's Municipal Residential Drinking Water Inspection Protocol contains 15 inspection modules consisting of approximately 100 regulatory questions. Those protocol questions are also linked to definitive guidance that ministry inspectors use when conducting MRDWS inspections.

[ontario.ca/drinkingwater](http://ontario.ca/drinkingwater)

The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality monitoring. The inspection protocol also contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry assessed each of the inspection protocol regulatory questions to determine the risk (not complying with the regulation) to the delivery of safe drinking water. This assessment was based on established provincial risk assessment principles, with each question receiving a risk rating referred to as the Question Risk Rating. Based on the number of areas where a system is deemed to be non-compliant during the inspection, and the significance of these areas to administrative, environmental, and health consequences, a risk-based inspection rating is calculated by the ministry for each drinking water system.

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system’s operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The inspection rating reflects the inspection results of the specific drinking water system for the reporting year. Since the methodology is applied consistently over a period of years, it serves as a comparative measure both provincially and in relation to the individual system. Both the drinking water system and the public are able to track the performance over time, which encourages continuous improvement and allows systems to identify specific areas requiring attention.

The ministry’s annual inspection program is an important aspect of our drinking water safety net. The ministry and its partners share a common commitment to excellence and we continue to work toward the goal of 100 per cent regulatory compliance.

## Determining Potential to Compromise the Delivery of Safe Water

The risk management approach used for MRDWS is aligned with the Government of Ontario’s Risk Management Framework. Risk management is a systematic approach to identifying potential hazards, understanding the likelihood and consequences of the hazards, and taking steps to reduce their risk if necessary and as appropriate.

The Risk Management Framework provides a formula to be used in the determination of risk:

$$\text{RISK} = \text{LIKELIHOOD} \times \text{CONSEQUENCE}$$

(of the consequence)

Every regulatory question in the inspection protocol possesses a likelihood value (L) for an assigned consequence value (C) as described in **Table 1** and **Table 2**.

TABLE 1:	
Likelihood of Consequence Occurring	Likelihood Value
0% - 0.99% (Possible but Highly Unlikely)	L = 0
1 – 10% (Unlikely)	L = 1
11 – 49% (Possible)	L = 2
50 – 89% (Likely)	L = 3
90 – 100% (Almost Certain)	L = 4

TABLE 2:	
Consequence	Consequence Value
Medium Administrative Consequence	C = 1
Major Administrative Consequence	C = 2
Minor Environmental Consequence	C = 3
Minor Health Consequence	C = 4
Medium Environmental Consequence	C = 5
Major Environmental Consequence	C = 6
Medium Health Consequence	C = 7
Major Health Consequence	C = 8

The consequence values (0 through 8) are selected to align with other risk-based programs and projects currently under development or in use within the ministry as outlined in **Table 2**.

The Question Risk Rating for each regulatory inspection question is derived from an evaluation of every identified consequence and its corresponding likelihood of occurrence:

- All levels of consequence are evaluated for their potential to occur
- Greatest of all the combinations is selected.

The Question Risk Rating quantifies the risk of non-compliance of each question relative to the others. Questions with higher values are those with a potentially more significant impact on drinking water safety and a higher likelihood of occurrence. The highest possible value would be 32 (4×8) and the lowest would be 0 (0×1).

**Table 3** presents a sample question showing the risk rating determination process.

**TABLE 3:**

**Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated?**

**Risk = Likelihood × Consequence**

C=1	C=2	C=3	C=4	C=5	C=6	C=7	C=8
<b>Medium</b> Administrative Consequence	<b>Major</b> Administrative Consequence	<b>Minor</b> Environmental Consequence	<b>Minor</b> Health Consequence	<b>Medium</b> Environmental Consequence	<b>Major</b> Environmental Consequence	<b>Medium</b> Health Consequence	<b>Major</b> Health Consequence
L=4 (Almost Certain)	L=1 (Unlikely)	L=2 (Possible)	L=3 (Likely)	L=3 (Likely)	L=1 (Unlikely)	L=3 (Likely)	L=2 (Possible)
<b>R=4</b>	<b>R=2</b>	<b>R=6</b>	<b>R=12</b>	<b>R=15</b>	<b>R=6</b>	<b>R=21</b>	<b>R=16</b>

## Application of the Methodology to Inspection Results

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions related to regulatory compliance and input their “yes”, “no” or “not applicable” responses into the Ministry’s Laboratory and Waterworks Inspection System (LWIS) database. A “no” response indicates non-compliance. The maximum number of regulatory questions asked by an inspector varies by: system (i.e., distribution, stand-alone); type of inspection (i.e., focused, detailed); and source type (i.e., groundwater, surface water).

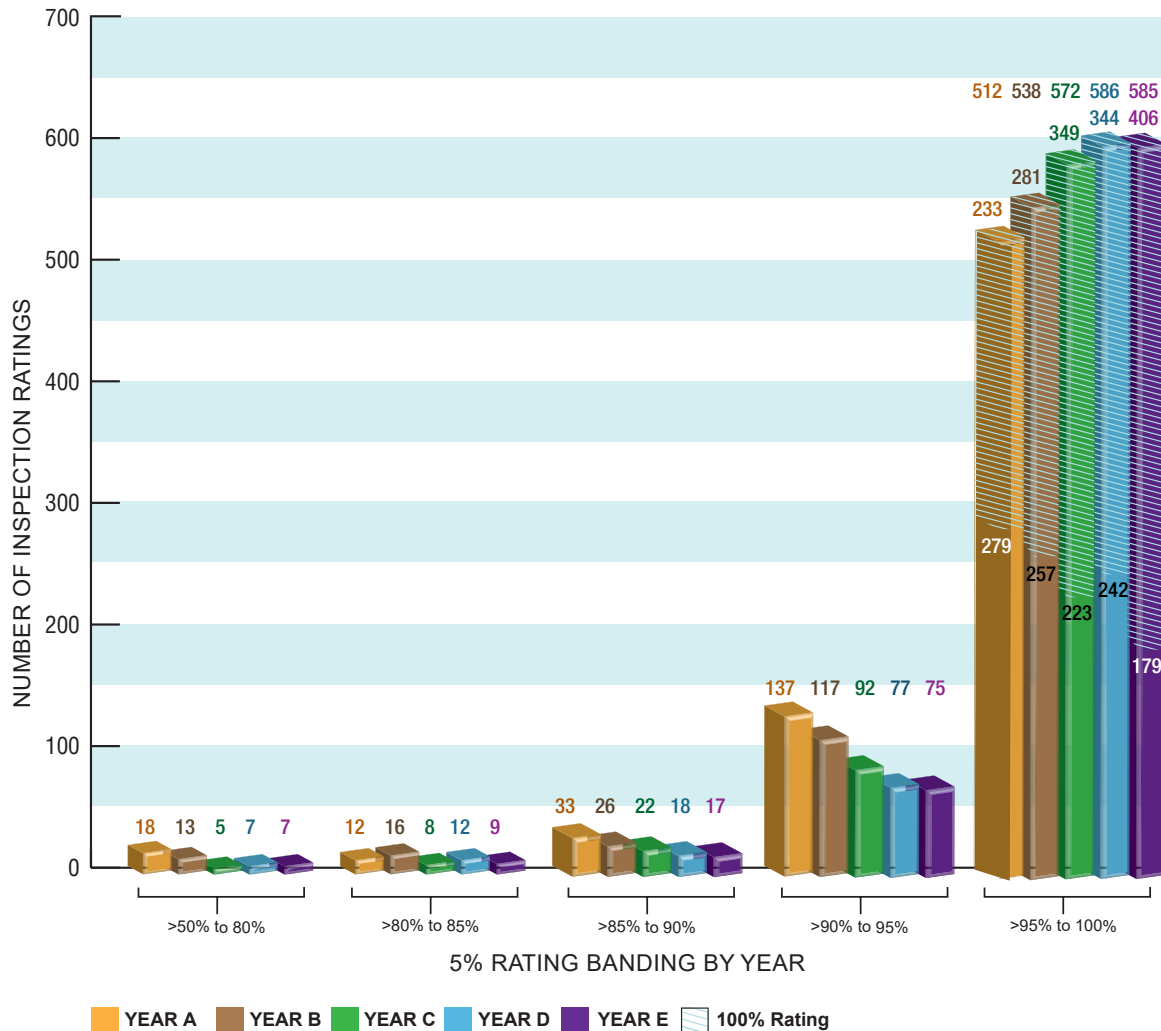
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

## Application of the Methodology for Public Reporting

The individual MRDWS Total Inspection Ratings are published with the ministry's Chief Drinking Water Inspector's Annual Report.

**Figure 1** presents the distribution of MRDWS ratings for a sample of annual inspections. Individual drinking water systems can compare against all the other inspected facilities over a period of inspection years.

**Figure 1: Year Over Year Distribution of MRDWS Ratings**



## Reporting Results to MRDWS Owners/Operators

A summary of inspection findings for each system is generated in the form of an Inspection Rating Record (IRR). The findings are grouped into the 15 possible modules of the inspection protocol,

which would provide the system owner/operator with information on the areas where they need to improve. The 15 modules are:

- |                         |                                 |  |  |
|-------------------------|---------------------------------|--|--|
| 1. Source               | 5. Treatment Process Monitoring | 9. Logbooks                            | 13. Water Quality Monitoring                       |
| 2. Permit to Take Water | 6. Process Wastewater           | 10. Contingency and Emergency Planning | 14. Reporting, Notification and Corrective Actions |
| 3. Capacity Assessment  | 7. Distribution System          | 11. Consumer Relations                 | 15. Other Inspection Findings                      |
| 4. Treatment Processes  | 8. Operations Manuals           | 12. Certification and Training         |  |

For further information, please visit [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)



## STAKEHOLDER GUIDE

# 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](#)