

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

Drinking Water and Environmental
Compliance Division

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**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**

Division de la conformité en matière d'eau
potable et d'environnement

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July 7, 2023

The Corporation of the Town of Aylmer

46 Talbot St.
Aylmer, Ontario
N5H 1J7

Attention: **Connor Bailey**, Manager of Water Operations
Regarding: **Aylmer Distribution System (WW# 260002136)** Final Inspection Report
Inspection conducted on June 6, 2022

The enclosed Drinking Water Inspection Report outlines non-compliances, if any, with Ministry legislation, and policies for the above noted water system. Violations noted in this report, if any, have been evaluated based on community risk. These violations will be monitored for compliance with the minimum standards for drinking water in Ontario as set forth under the *Safe Drinking Water Act* and the associated regulations. Where risk is deemed to be high and/or compliance is an ongoing concern, violations will be forwarded to this Ministry's Investigation and Enforcement Branch.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation and Enforcement (II&E) Secretariat and advice of internal/external risk experts. The Inspection summary Rating Record (IRR) provides the Ministry, the system owner, and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance.

Section 19 of the *Safe Drinking Water Act* (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "*Taking Care of Your Drinking Water: A guide for members of municipal council*" found under "Drinking Water" on the Drinking Water Ontario website at www.ontario.ca/page/taking-care-your-drinking-water-guide-members-municipal-councils.

Attached to the report is the IRR methodology guidance describing how the risk rating model has improved to better reflect the health related and administrative non-compliance found in an inspection report. IRR

ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspector's Annual Report. **Please note that due to a change in IT systems, the Inspection Rating Report (IRR) cannot be generated at the same time as the inspection report. The IRR will be sent separately and prior to any public release (typically within 1-2 month of the completion of the inspection).**

Should you have any questions regarding the report, please feel free to contact me at (519) 317-8084.

Sincerely,

A handwritten signature in dark ink, appearing to read 'A. Stroyberg', with a stylized flourish at the end.

Angela Stroyberg
Provincial Officer
Water Inspector
London District Office
Angela.Stroyberg@Ontario.ca

cc. Southwestern Public Health Unit
Catfish Creek Conservation Authority
London District File



AYLMER DISTRIBUTION SYSTEM
46 TALBOT ST W, AYLMER, ON, N5H 1J7
INSPECTION REPORT

System Number: 260002136
Entity: CORPORATION OF THE TOWN
OF AYLMER
Inspection Start Date: June 06, 2023
Inspection End Date: July 07, 2023
Inspected By: Angela Stroyberg
Badge #: 1695



(signature)

NON-COMPLIANCE

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

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

RECOMMENDATIONS

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

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

INSPECTION DETAILS

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

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

Question ID	DWMR1001000	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: What was the scope of this inspection?			
Compliance Response(s)/Corrective Action(s)/Observation(s): <p>The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.</p> <p>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.</p> <p>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.</p>			

An inspection of the Aylmer Distribution System was conducted on June 6, 2023 by Provincial Officer Angela Stroyberg. As part of the inspection, several documents were reviewed in association with this report. Generally, these include but are not restricted to the following:

- 1) Drinking Water Works Permit # 044-201 – Issue Number 3, dated November 30, 2021.
- 2) Municipal Drinking Water Licence # 044 – 101 – Issue 4, dated Number 4, 2021
- 3) Aylmer Distribution Water System Operations and Maintenance Manual dated February 2019.
- 4) Online Continuous Monitoring Data for the inspection review period.
- 5) Other operational documents maintained by the Owner/Operating Authority for the inspection period.

This report also includes a review and assessment of compliance and operating practices in relation to the following Acts and Regulations:

- 1) Safe Drinking Water Act 2002;
- 2) Drinking Water Systems Regulation (Ontario Regulation 170/03);
- 3) Ontario Drinking Water Quality Standards (Ontario Regulation 169/03);
- 4) Ontario Water Resources Act 1990;
- 5) Certification of Drinking Water System Operator and Water Quality Analysts (Ontario Regulation 128/04).

It should be noted that the inspection review period covers the period from May 1, 2022 to May 31, 2023.

Question ID	DWMR1000000	Question Type	Information
Legislative Requirement(s):			
Not Applicable			
Question:			
Does this drinking water system provide primary disinfection?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
This drinking water system provides for only secondary disinfection and distribution of water. Primary disinfection is undertaken by another regulated drinking water system which provides treated water to this drinking water system.			

Question ID	DWMR1018000	Question Type	Legislative
Legislative Requirement(s):			
SDWA 31 (1);			

Question:

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

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

The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.

Observations made at the time of the inspection indicated that the equipment and components that are described under Schedule A and Schedule C of the Drinking Water Works Permit # 044-201 – Issue #3 were installed for the Aylmer Distribution System.

Question ID	DWMR1020000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 1 documents were prepared in accordance with their Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period. The Owner/Operating Authority provided three (3) Form 1 documents pertaining to the installation of new watermains and appurtenances throughout the distribution system.			

Question ID	DWMR1114000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Does the owner have evidence that, when required, all legal owners associated with the DWS were notified of the requirements of the Licence & Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had evidence that required notifications to all legal owners associated with the Drinking Water System had been made during the inspection period.			

Question ID	DWMR1025000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			

Question:

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

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

All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.

Drinking Water Works Permit #044-201 Issue #3 Section 2.3 of Schedule B states that all parts of the drinking water system in contact with drinking water which are added, modified, replaced, extended, shall be disinfected before being put into service in accordance with a procedure approved by the director or in accordance with the application provisions of the following documents:

- a) Until May 29, 2022, the Ministry's Watermain Disinfection Procedure, dated November 2015. As of May 30, 2022, the ministry's Disinfection Procedure, dated August 1, 2020;
- b) Subject to condition 2.3.2, any updated version of the ministry's Water Disinfection Procedure;
- c) AWWA C652 – Standard for Disinfection of Water-Storage Facilities;
- d) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
- e) AWWA C654 – Standard for Disinfection of Wells.

For greater clarity, where an activity has occurred that could introduce contamination, including but not limited to repair, maintenance, or physical/ video inspection, all equipment that may come in contact with the drinking water system shall be disinfected in accordance with the requirements of condition 2.3 above.

According to documentation submitted, the Owner/Operating Authority ensured that all approved disinfection procedures were correctly and accurately followed and documented following any activities that may have led to contamination.

Question ID	DWWMR1033000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4);			
Question:			
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?			

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

The secondary disinfectant residual was measured as required for the large municipal residential distribution system.

At the time of the inspection, an online free chlorine analyzer was observed at the Aylmer Standpipe to monitor the free chlorine in the distribution system. In addition to the above, manual samples are also collected and tested for free chlorine with the collection of weekly microbiological samples. Based on the aforementioned, the Owner/Operating Authority has complied with the legislative requirement.

Question ID	DWMR1035000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10;			
Question:			
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.			

Ontario Regulation 170/03 Schedule 6-5(1) states that if a drinking water system uses continuous monitoring equipment for sampling and testing that is required under this Regulation, or under an approval, municipal drinking water licence, drinking water works permit, or order, for a parameter set out in the Table to this section the owner of the system and the operating authority for the system shall ensure that the following standards are met:

4. The continuous monitoring equipment must, except when no water is being directed to users of water sampled by the equipment
 - i. Test for the parameter with at least minimum frequency specified in the Table for the parameter, and
 - ii. Record the date, time, sampling location and results of every test for the parameter with at least the minimum frequency referred to in subparagraph i.
5. If the continuous monitoring of the equipment tests for a parameter more often then required by subparagraph 1i, the equipment may, instead of complying with subparagraph 1ii,
 - iii. Record the minimum, maximum and mean results of tests for the parameter for every period that is equal to the length of time referred to in subparagraph 1i, along with the sampling location, date of the tests conducted during the period and the time of at the end of the period, and
 - iv. Record the result of every test that causes an alarm to signal under paragraph 1 of subsection (1.1), along with the sampling location and the date and time of the test.
6. Test results recorded under paragraph 1 or 2 must be examined, within 72 hours of the tests are conducted by a
 - (i) Certified operator in the case of a Large Municipal Residential System.

According to documentation submitted for the inspection review period indicated that Operators ensured that the aforementioned requirements were complied with.

Question ID	DWMR1038000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			
Question: Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?			

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

Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.

Question ID	DWMR1037000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question:			
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
All continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.			
All alarms associated with the drinking water system are transmitted from the PLC to an auto dialer or SCADA system to notify an on-call operator should a parameter output reading fluctuate above or below the alarm set points. Minor adjustments to the alarm set points may occur based on operating conditions at the operator's discretion.			

Question ID	DWMR1040000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10;			
Question:			
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.			

The current minimum regulatory requirements under O. Reg 170/03 Schedule 6-5 stipulate that continuous monitoring equipment calibrations are to be conducted as often as necessary to ensure that test results are within the appropriate margin of error. Documents submitted for review indicated that a contractor performs calibrations on the chlorine analyzer and all handhelds on a regular basis. According to documentation, the last calibration occurred on June 2, 2022.

In addition to regular calibrations, the operating authority frequently performs verification checks on the equipment and adjusts them accordingly to ensure accuracy.

Question ID	DWMR1108000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.			

Question ID	DWMR1099000	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03)?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records did not show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03).			

Over the course of the inspection period, one (1) adverse water quality incidents (exceedance) occurred and are as follows:

Aylmer Distribution System

April 14, 2023

AWQI# 161758 = 0.0161 mg/L of Lead

Question ID	DWMR1081000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10-2 (1); SDWA O. Reg. 170/03 10-2 (2); SDWA O. Reg. 170/03 10-2 (3);			
Question: For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met.			
Ontario Regulation 170/03, Schedule 10-2 stipulates that distribution water samples are required to be collected and tested for E.coli, Total Coliforms and that at least 25 percent of the samples are tested for general bacterial population expressed as colony counts on a heterotrophic plate count with the prescribed frequency stipulated in Schedule 6-1.1(1) of O. Reg 170/03.			
Over the course of the inspection period, the Owner/Operating Authority collected weekly distribution microbiological samples. The Owner/Operating Authority is also required to collect a minimum of 15 samples per month based on the population served. A review of documentation indicated that between 16-20 samples were collected per month. Based on the aforementioned, the Owner/Operating Authority is in compliance with the legislative requirement.			

Question ID	DWMR1096000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-3 (1);			
Question: Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?			

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

Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.

Question ID	DWMR1086000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 13-6.1 (1); SDWA O. Reg. 170/03 13-6.1 (2); SDWA O. Reg. 170/03 13-6.1 (3); SDWA O. Reg. 170/03 13-6.1 (4); SDWA O. Reg. 170/03 13-6.1 (5); SDWA O. Reg. 170/03 13-6.1 (6);			
Question:			
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.			
Haloacetic Acid samples are required to be collected and tested each calendar quarter from the distribution system in accordance with Schedule 13-6.1 of O. Reg 170/03 with the frequency stipulated in Schedule 6-1.1(4). According to documentation the following samples were taken:			
Aylmer Distribution System			
1) April 3, 2023 = 18.1 ug/L			
2) January 3, 2023 = 7.5 ug/L			
3) October 03, 2022 = 26.3 ug/L			
4) July 4, 2022 = 16.4 ug/L			
Based on the aforementioned the Owner/Operating Authority is in compliance with the requirements for collecting Haloacetic Acid samples as per Schedule 13-6.1 of O. Reg 170/03.			

Question ID	DWMR1087000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 13-6 (1); SDWA O. Reg. 170/03 13-6 (2); SDWA O. Reg. 170/03 13-6 (3); SDWA O. Reg. 170/03 13-6 (4); SDWA O. Reg. 170/03 13-6 (5); SDWA O. Reg. 170/03 13-6 (6);			
Question:			
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?			

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

All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

Trihalomethane samples are required to be collected and tested every calendar quarter from the distribution system in accordance with O. Reg 170/03, Schedule 13-6 with the prescribed frequency stipulated in Schedule 6-1.1(4). According to documentation, the following samples were collected:

Aylmer Distribution System

- 1) April 3, 2023 = 18 ug/L
- 2) January 3, 2023 = 16 ug/L
- 3) October 03, 2022 = 31 ug/L
- 4) July 4, 2022 = 21 ug/L

Based on the aforementioned, the Owner/Operating Authority is in compliance with the requirements for collecting trihalomethane samples as per Schedule 13-6 of O. Reg 170/03.

Question ID	DWMR1101000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 17-1; SDWA O. Reg. 170/03 17-10 (1); SDWA O. Reg. 170/03 17-11; SDWA O. Reg. 170/03 17-12; SDWA O. Reg. 170/03 17-13; SDWA O. Reg. 170/03 17-14; SDWA O. Reg. 170/03 17-2; SDWA O. Reg. 170/03 17-3; SDWA O. Reg. 170/03 17-4; SDWA O. Reg. 170/03 17-5; SDWA O. Reg. 170/03 17-6; SDWA O. Reg. 170/03 17-9;			
Question:			
For LMR Systems, have corrective actions (as per Schedule 17 of O. Reg. 170/03) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
Corrective actions (as per Schedule 17), including any other steps that were directed by the Medical Officer of Health, had been taken to address adverse conditions.			
According to documentation that was reviewed for the inspection period, the Owner/Operating Authority completed all appropriate corrective actions as directed for all adverse water quality incidents that occurred during the inspection period. A DWA was issued for the residences of George Street in Aylmer on April 14, 2023 and the DWA was rescinded on April 20, 2023 after satisfactory test results were received from the resamples (0.27 ug/L).			

Question ID	DWMR1104000	Question Type	Legislative
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Legislative Requirement(s):

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

Question:

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

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

All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.

Question ID	DWMR1113000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 10.1 (3);			
Question:			
Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
All changes to the system registration information were provided within ten (10) days of the change.			

Question ID	DWMR1059000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 128/04 28;			
Question:			
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.			

The current regulatory requirements under O. Reg 128/04 s.28 stipulates that the Owner/Operating Authority of a subsystem shall ensure that operators and maintenance personnel in the subsystem have ready access to the comprehensive operations and maintenance manuals that contain plans, drawings, and process descriptions sufficient for the safe efficient operation of the subsystem. A review of Aylmer Distribution System's Operations and Maintenance Manual dated February 2019 indicated that the manual did contain the aforementioned requirements.

Question ID	DWMR1060000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA. Municipal Drinking Water Licence #044-101 – Issue # 3, Section 16 of Schedule B outline the requirements for the Operations and Maintenance Manuals. The Aylmer Distribution System's Operations and Maintenance Manual contain the aforementioned requirements as stated in the MDWL including but not limited to; contingency plans, procedures to deal with emergencies, procedures for dealing with complaints associated with the drinking water system and copies of the current permit and licence.			

Question ID	DWMR1061000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 27 (1); SDWA O. Reg. 128/04 27 (2); SDWA O. Reg. 128/04 27 (3); SDWA O. Reg. 128/04 27 (4); SDWA O. Reg. 128/04 27 (5); SDWA O. Reg. 128/04 27 (6); SDWA O. Reg. 128/04 27 (7);			
Question: Are logbooks properly maintained and contain the required information?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Logbooks were properly maintained and contained the required information.			

Ontario Regulation 128/04 s. 27, stipulate the requirements for record keeping for the operations of a subsystem. The Operating Authority maintains two (2) logbooks, one is located at the Aylmer Standpipe and one at the Works yard to document scheduled operational checks, manual free chlorine residuals and any other operational or maintenance activities that may have occurred within the distribution system.

Question ID	DWMR1062000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-5;			
Question: Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.			

Question ID	DWMR1071000	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Has the owner provided security measures to protect components of the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had provided security measures to protect components of the drinking water system. The Aylmer Standpipe remains locked at all times and is enclosed by security fencing with a lockable gate. In addition to the aforementioned the facility is visited regularly by staff.			

Question ID	DWMR1073000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1);			

Question:

Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?

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

The overall responsible operator had been designated for each subsystem.

Ontario Regulation 128/04 S.23(1) states that the owner or operating authority of a municipal residential subsystem shall designate as overall responsible operator of the subsystem an operator who holds a certificate for that type of subsystem and that is of the same class as or higher than the class of that subsystem. (For example, the overall responsible operator of a Class III water treatment subsystem must be an operator who holds a Class III or Class IV water treatment subsystem operator's certificate.)

The Owner/Operating Authority currently employ several operators qualified to act as the Overall Responsible Operator for the drinking water system to ensure sufficient coverage in the event of an absence.

Question ID	DWMR1074000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 25 (1);			
Question: Have operators-in-charge been designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators-in-charge had been designated for all subsystems which comprise the drinking water system.			
Ontario Regulation 128/04 S. 25(1) states that the Owner or Operating Authority of a subsystem or a person authorized by the Owner or Operating Authority shall designate one or more operators as operators-in-charge of the subsystem. The Owner/Operating Authority currently employ a number of operators who are designated as Operator-In-Charges for the system.			

Question ID	DWMR1075000	Question Type	Legislative
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Legislative Requirement(s): SDWA O. Reg. 128/04 22;
Question: Do all operators possess the required certification?
Compliance Response(s)/Corrective Action(s)/Observation(s): All operators possessed the required certification. Ontario Regulation 128/03 s. 22 states that the Owner or Operating Authority of a subsystem shall ensure that every operator employed in the subsystem holds, (a) a certificate applicable to that type of subsystem; or (b) a certificate applicable to that subsystem, in the case of an operator who holds a conditional certificate issued or renewed under section 10. All operators employed by the Owner/Operating Authority possess all the appropriate certification required to operate the drinking water system.

Question ID	DWMR1076000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Do only certified operators make adjustments to the treatment equipment?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Only certified operators made adjustments to the treatment equipment.			

Inspection Rating and Inspection Risk Methodology

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.

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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:

RISK = LIKELIHOOD × 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
Medium Administrative Consequence	Major Administrative Consequence	Minor Environmental Consequence	Minor Health Consequence	Medium Environmental Consequence	Major Environmental Consequence	Medium Health Consequence	Major 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)
R=4	R=2	R=6	R=12	R=15	R=6	R=21	R=16

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).

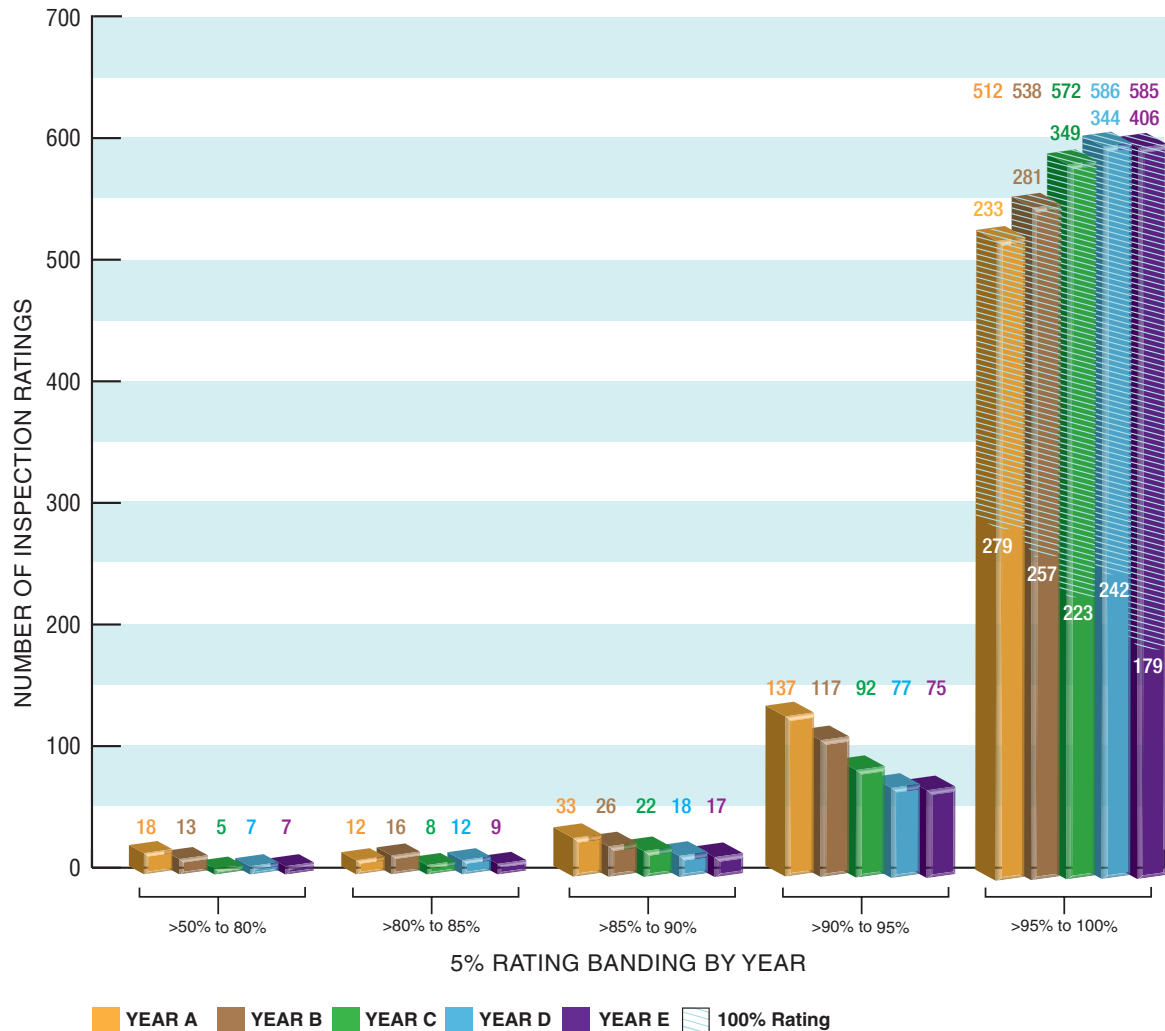
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

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

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2023-24)

DWS Name: AYLMER DISTRIBUTION SYSTEM
DWS Number: 260002136
DWS Owner: CORPORATION OF THE TOWN OF AYLMER
Municipal Location: AYLMER

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jun-6-2023
Ministry Office: London District Office

Maximum Risk Rating: 343

Inspection Module	Non Compliance Risk (X out of Y)
Certification and Training	0/42
Logbooks	0/18
Operations Manuals	0/28
Reporting & Corrective Actions	0/74
Treatment Processes	0/130
Water Quality Monitoring	0/51
Overall - Calculated	0/343

Inspection Risk Rating:	0.00%
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Final Inspection Rating:	100.00%
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Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2023-24)

DWS Name: AYLMER DISTRIBUTION SYSTEM
DWS Number: 260002136
DWS Owner Name: CORPORATION OF THE TOWN OF AYLMER
Municipal Location: AYLMER

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jun-6-2023
Ministry Office: London District Office

All legislative requirements were met. No detailed rating scores.

Maximum Question Rating: 343

Inspection Risk Rating:	0.00%
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FINAL INSPECTION RATING:	100.00%
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