

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

Drinking Water and Environmental
Compliance Division
Southwest Region
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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
Région Sud-Ouest
733, rue Exeter
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March 11, 2026

Corporation of the Town of Essex
33 Talbot Street
Essex, Ontario
N8M 1A8

Attention: Kate Giurussevich, CAO
Kevin Girard, Director Infrastructure Services

Re: Essex Drinking Water System, Harrow-Colchester South Inspection Report (DWS# 210000130)
Inspection conducted on December 12, 2025

Dear Ms. Giurussevich and Mr. Girard,

Enclosed is the report on the 2025-26 inspection of the Essex Drinking Water System - Harrow-Colchester South, and the corresponding Inspection Rating Report (IRR) and Risk Methodology document.

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 Councils" on the Drinking Water Ontario website at <https://www.ontario.ca/environment-and-energy/taking-care-your-drinking-water-guide-members-municipal-councils>.

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

If you have any questions or concerns regarding the rating, please contact Mark Smith, Water Compliance Supervisor, at 519-317-8116.

Yours truly,

A handwritten signature in black ink, appearing to read "Paul Merritt", written over a light blue horizontal line.

Paul Merritt
Provincial Officer
London District Office

cc. Windsor-Essex County Health Unit
Essex Region Conservation Authority
Ontario Clean Water Agency



ESSEX DRINKING WATER SYSTEM (HARROW-COLCHESTER SOUTH)

Physical Address: 405 CLITHEROW ST, ESSEX,
ON N0R 1G0

INSPECTION REPORT

System Number: 210000130
Entity: THE CORPORATION OF THE
TOWN OF ESSEX
ONTARIO CLEAN WATER
AGENCY
Inspection Start Date: December 08, 2025
Site Inspection Date: December 12, 2025
Inspection End Date: February 17, 2026
Inspected By: Paul Merritt
Badge #: 1531



(signature)

INTRODUCTION

Purpose

This announced, focused 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 Town of Essex . The Treatment Plant is operated by the Ontario Clean Water Agency ("OCWA"), while the Corporation of the Town of Essex oversees the distribution system.

The system serves an estimated population of 10400 and is categorized as a Large Municipal Residential System. Information reviewed for this inspection covered the time period of January 1, 2025 to November 30, 2025.

Systems/Components

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

- Low Lift Pumping Station
- Water Treatment Plant

An outstation is a component of a drinking water system that is not located at either a water treatment plant or a well supply and is generally not associated with primary treatment, for example reservoirs, booster stations, and re-chlorination facilities located within the distribution system. Outstations may be visited on a rotational basis as part of a ministry inspection. This inspection included the inspection of:

- The Harrow Water Tower

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. Drinking Water Works Permit #029-201, Issue #3 dated April 6, 2021
2. Municipal Drinking Water License #029-101, Issue #3 dated April 6, 2021
3. Permit to Take Water # 4088-9KDN6D dated May 23, 2014
4. Permit to Take Water # 6356-D34JXB dated April 22, 2024

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>Question ID: DWMR1113001</p> <p>Were changes to the system registration information provided to the ministry within ten (10) days of the change?</p>	<p>Changes to the system registration information were not provided within ten (10) days of the change.</p> <p>Corrective Action: The Owner / Operating Authority shall forthwith make appropriate modifications to their drinking water works profile information to ensure it is accurate and up to date as prescribed by Ontario Regulation 170/03 – Section 10.1(3). The aforementioned modifications can be emailed to waterforms@ontario.ca. Additionally, the Owner / Operating Authority shall forward the aforementioned modifications to Paul Merritt of the Ministry of Environment, Conservation and Parks upon completion.</p> <p>These corrective actions were requested in person at the time of the inspection. The appropriate modifications for their drinking water works profile information were initiated and completed on the same date as the site inspection and the corrective actions were requested - December 12, 2025.</p> <p>Ontario Regulation 170/03 – Section 10.1(3) stipulates that if there is any change to the information given to the Director under subsection (1) or (2), the owner of the drinking water system shall give the Director written notice of the change within 10 days of the change.</p> <p>The inspecting officer determined that the listed owner contact information, the CAO, in the system profile had retired on May 16, 2025.</p>

The system profile was not updated for approximately 6 months. Accurate information regarding the systems owner is important in the event that the owner needs to be contacted by regulatory agencies.

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	DWMR1012001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner have a harmful algal bloom monitoring plan in place that met the requirements of the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had a harmful algal bloom monitoring plan in place which met the requirements. Standard Operating Procedure (SOP) OCWA–C3-41 – Harmful Algal Bloom Monitoring, Reporting and Sampling Plan issued May 15, 2025, was reviewed by the inspecting officer for this inspection. OCWA–C3-41 met the requirements of the Municipal Drinking Water Licence (MDWL).			

Question ID	DWMR1014001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Flow monitoring was performed as required. The Treatment Plant is equipped with a continuous flow meter located downstream of the low lift pumps to measure and record the flow of all raw water into the Treatment Plant. In addition, there is a continuous flow meter located downstream of the high lift pumps which measures all of the flow leaving the Treatment Plant and entering into the distribution system. The inspecting officer observed the continuous flow meter for influent raw flow installed in the works just before raw water enters the clarifier. The flow recorded at the time the meter was inspected was 52.2 L/S. Table 1 of Schedule C in the Municipal Drinking Water Licence (MDWL) states the rated capacity for the system as 10,228 cubic meters a day. Table 2 of schedule C does not list maximum flow rate requirements for the licence. Flow monitoring was performed as required by the Drinking Water Works Permit (DWWP) and the MDWL.			

Flow meter calibration records were provided for inspection and showed the last calibration was completed in July of 2025.

Question ID	DWMR1016001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions. Table 1 of Schedule C in the Municipal Drinking Water Licence (MDWL) states the rated capacity for the system as 10,228 cubic meters a day. Table 2 of schedule C does not list maximum flow rate requirements for the licence. According to the documents provided to the officer for review, the rated capacity for the Treatment Plant was not exceeded over the course of the inspection period. July 5, 2025, had the highest flow recorded with a total of 5861 cubic Meters recorded by the raw water flow meter and 5235 cubic meters recorded by the treated water flow meter.			

Question ID	DWMR1018001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner ensure that equipment was 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 ensured that equipment was installed as required.			

Question ID	DWMR1021001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were Form 2 documents prepared as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Form 2 documents were prepared as required.			

Two Form 2 documents were provided and reviewed by the inspecting officer. The Form 2's provided were associated to a new backwash pump (PENTAIR - 7100AW Serial # 10818380) as the previous pump had reached the end of its life cycle, as well as for a new inlet valve for (Rotork) added as a battery backup as a failsafe.

Question ID	DWMR1025001	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 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 as required.			

Question ID	DWMR1023001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: 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?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed.			

Question ID	DWMR1024001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required.			

Question ID	DWMR1033001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4);			
Question: Was secondary disinfectant residual tested as required for the large municipal residential distribution system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Secondary disinfectant residual was tested as required. The inspecting officer reviewed the completed forms known as "2025 Harrow-Colchester South Water Distribution Chlorine Residuals as per O. Reg. 170/03" from January 2025 to November 2025. These completed forms showed weekly chlorine residual sample results from Sample Stations #1 to #9 within the distribution system. Operators took three samples on one date from different sample stations within the distribution system, and then after 48 hours another four samples were taken at other sample stations. The lowest observed distribution residual sample taken during the scheduled fours and threes was 0.56 mg/L taken on July 21, 2025. This result is above the 0.05 mg/L free chlorine minimum required by O. Reg 170 in distribution systems.			

Question ID	DWMR1030001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (1); SDWA O. Reg. 170/03 7-2 (2);			
Question: Was primary disinfection chlorine monitoring being conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit or at/near a location where the intended CT had just been achieved?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Primary disinfection chlorine monitoring was conducted as required. The Essex Treatment Plant utilizes a reservoir and a clearwell to ensure sufficient contact time for the injected chlorine gas to react with the raw water and achieve adequate primary disinfection. At the time of the inspection, a continuous free chlorine analyzer was installed within the clearwell for operational monitoring. In addition, a final treated water free chlorine continuous analyzer was located downstream of the reservoirs. This analyzer is designated as the regulatory instrument used to measure the free chlorine concentration of the treated water entering the distribution system and to verify compliance with primary disinfection requirements.			

Question ID	DWMR1032001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-3 (2);			
Question: If the drinking water system obtained water from a surface water source and provided filtration, was continuous monitoring of each filter effluent line performed for turbidity?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Continuous monitoring of each filter effluent line was performed for turbidity.			
Filter #1 and Filter #2 at the Harrow Colchester Water Treatment Plant are continuously monitored for turbidity from calibrated turbidity meters located shortly after water exits each filter. The inspecting officer reviewed continuously monitored turbidity at 5 minute intervals. These turbidity meters send information to the online SCADA system which continuously updates operators with turbidity information measured in NTU's. The inspecting officer reviewed and confirmed all continuous monitoring intervals were accounted for during the inspection period and reviewed all instances of elevated turbidity from each filter against plant flow and logbooks. All elevated events of turbidity occurred when water was not flowing through treatment and generally occurred during Filter backwashing event. The treatment system is designed to send filter effluent water to waste in the event that turbidity exceeds 0.28 NTU. Logbooks indicated that operators were notified of alarms which were triggered by the continuous monitoring from the filter effluent lines. Logbooks also indicated operators were monitoring the filter effluent line turbidity for each filter to determine backwash events.			

Question ID	DWMR1035001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			
Question: Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators were examining continuous monitoring test results as required.			
The inspecting officer reviewed logbooks and the "Daily Reports" binder, which confirmed Operators examined continuous monitoring test results within 72 hours. Operators confirmed in each daily shift that daily reports had been reviewed - including the maximum, minimum and averages taken by continuous monitoring and that CT had been achieved. Each daily report was initialed by the reviewing operator.			

Question ID	DWMR1038001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			

<p>Question: Was continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format?</p>
<p>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 and recording data with the prescribed format.</p> <p>SCADA data for continuous monitoring equipment was provided with 5 minute intervals for Chlorination, Turbidity, raw and effluent flow, reservoir levels, and pH. Minimum frequency for continuous monitoring equipment was met for the inspection period.</p>

Question ID	DWMR1037001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Were 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, equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All required continuous monitoring equipment utilized for sampling and testing were equipped with alarms or shut-off mechanisms that satisfied the standards			

Question ID	DWMR1040001	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: Were 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 as required.			

Question ID	DWMR1108001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			

<p>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, Municipal Drinking Water Licence, Drinking Water Works Permit, or order triggered an alarm or an automatic shut-off, did a qualified person respond as required and take appropriate actions?</p>
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): A qualified person responded as required and took appropriate actions.</p> <p>The inspecting officer reviewed logbook entries for alarm call outs and cross referenced that with operator certificates provided by the operating authority. Only qualified persons responded to alarms associated to Chlorine residual and Turbidity.</p>

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

Question ID	DWMR1083001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10-3;			
Question: Were treated microbiological sampling requirements prescribed by Schedule 10-3 of O. Reg. 170/03 for large municipal residential systems met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Treated microbiological sampling requirements were met. <p>47 samples of treated water were taken for E. Coli, Total Coliforms and Heterotrophic Plate Count during this inspection period (January 1, 2025, to November 30,2025). The microbiological sampling requirements for treated water is one sample weekly, these requirements were met for this system.</p> <p>Samples were taken between 6 to 8 days apart. No exceedances were found in treated water samples for microbiological results.</p>			

Question ID	DWMR1081001	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: Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Distribution microbiological sampling requirements were met. The requirements for this system (LMR with a population of 10,000) is a minimum microbiological sampling frequency within the distribution system of 18 samples per month (8 samples plus 1 sample for every 1000 people = 18) with at least one sample completed per week. 25% of samples should include Heterotrophic Plate Count (HPC) 282 samples were taken within the distribution system for this DWS for E. Coli and Total Coliforms. 116 samples taken for HPC. Samples were taken weekly with between 6 and 8 days between samples. No exceedances occurred in any of these distribution microbiological samples. The distribution microbiological sampling requirements for this system were met.			

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

Question ID	DWMR1084001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-2;			
Question: Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Inorganic parameter sampling requirements were met. Inorganic samples were taken on April 14, 2025. All inorganic sample parameters were met, no exceedances or exceedances of half the MAC were observed by the inspecting officer.			

Question ID	DWMR1085001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-4 (1); SDWA O. Reg. 170/03 13-4 (2); SDWA O. Reg. 170/03 13-4 (3);			
Question: Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Organic parameter sampling requirements were met. Organic parameter samples were taken on April 14, 2025. All organic sample parameters were met, no exceedances or exceedances of half the MAC were observed by the inspecting officer.			

Question ID	DWMR1086001	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: Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Haloacetic acid sampling requirements were met.			

Question ID	DWMR1087001	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: Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Trihalomethane sampling requirements were met.			

Question ID	DWMR1088001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-7;			
Question: Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Nitrate/nitrite sampling requirements were met.			

Question ID	DWMR1089001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-8;			
Question: 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. Sodium samples were taken on April 14, 2025. Sample results were 8.57 mg/L. The Harrow-Colchester DWS takes sodium samples on a yearly basis with the previous sample taken on April 3, 2024. This meets and exceeds the required frequency for sodium samples. No exceedances were observed by the inspecting officer.			

Question ID	DWMR1090001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-9;			
Question: Where fluoridation is not practiced, were fluoride sampling requirements prescribed by Schedule 13-9 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Fluoride sampling requirements were met. Fluoride samples were taken on April 14, 2025. Sample results were 0.06 mg/L. The Harrow-Colchester DWS takes fluoride samples on a yearly basis with the previous sample taken on April 3, 2024. This meets and exceeds the required frequency for fluoride samples. No exceedances were observed by the inspecting officer.			

Question ID	DWMR1094001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			

Question:

Were water quality sampling requirements imposed by the Municipal Drinking Water Licence and Drinking Water Works Permit met?

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

Water quality sampling requirements were met.

The Municipal Drinking Water Licence requires additional samples to be taken for Total Suspended Solids within the wastewater retention ponds on a monthly basis. These samples were completed as required and no exceedances were observed by the inspecting officer.

The Municipal Drinking Water Licence also requires additional sampling of Microcystin as per the Harmful Algal Bloom Plan required by the licence. These samples were completed as required and no microcystins were found in treated water samples.

Question ID	DWMR1113001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 10.1 (3);</p>			
<p>Question: Were changes to the system registration information provided to the ministry within ten (10) days of the change?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Changes to the system registration information were not provided within ten (10) days of the change.</p> <p>Corrective Action: The Owner / Operating Authority shall forthwith make appropriate modifications to their drinking water works profile information to ensure it is accurate and up to date as prescribed by Ontario Regulation 170/03 – Section 10.1(3). The aforementioned modifications can be emailed to waterforms@ontario.ca. Additionally, the Owner / Operating Authority shall forward the aforementioned modifications to Paul Merritt of the Ministry of Environment, Conservation and Parks upon completion.</p> <p>These corrective actions were requested in person at the time of the inspection. The appropriate modifications for their drinking water works profile information were initiated and completed on the same date as the site inspection and the corrective actions were requested - December 12, 2025.</p> <p>Ontario Regulation 170/03 – Section 10.1(3) stipulates that if there is any change to the information given to the Director under subsection (1) or (2), the owner of the drinking water system shall give the Director written notice of the change within 10 days of the change.</p> <p>The inspecting officer determined that the listed owner contact information, the CAO, in the system profile had retired on May 16, 2025. The system profile was not updated for</p>			

approximately 6 months. Accurate information regarding the systems owner is important in the event that the owner needs to be contacted by regulatory agencies.

Question ID	DWMR1114001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: 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?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had evidence that the required notifications were made.			

Question ID	DWMR1045001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner update the document describing the distribution components within 12 months of completion of alterations to the system in accordance with the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had up-to-date documents describing the distribution components. Staff with the town of Essex were asked during the site inspection how often the documents describing the distribution components were updated. The inspecting officer determined the town reviews distribution GIS documents daily and PDF's describing the distribution components are updated annually. This annual update occurs during the spring.			

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

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Question ID	DWMR1062001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-5;			
Question: 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?			
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 done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03.			

Question ID	DWMR1071001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Did the owner provide security measures to protect components of the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner provided security measures to protect components of the drinking water system. The owner installed fencing in place around the intake building and the elevated tower. All doors and gates are locked with deadbolts or padlocks and operators are issued keys for entry. Venting and overflow structures for treated water had appropriate screens, gaskets and were secure.			

Question ID	DWMR1073001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1);			
Question: Was an overall responsible operator designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): An overall responsible operator was designated for all subsystem.			

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

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

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



Stakeholder References

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.

For more information on Ontario's drinking water visit 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](#)

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PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web

Ontario



**Ministry of the Environment, Conservation and Parks
Drinking Water System Inspection Report Appendix B**

Inspection Rating Record 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 up to 14 inspection modules and consists of approximately 120 regulatory questions. Those protocol questions are also linked to definitive guidance that ministry inspectors use when conducting MRDWS inspections.

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
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).

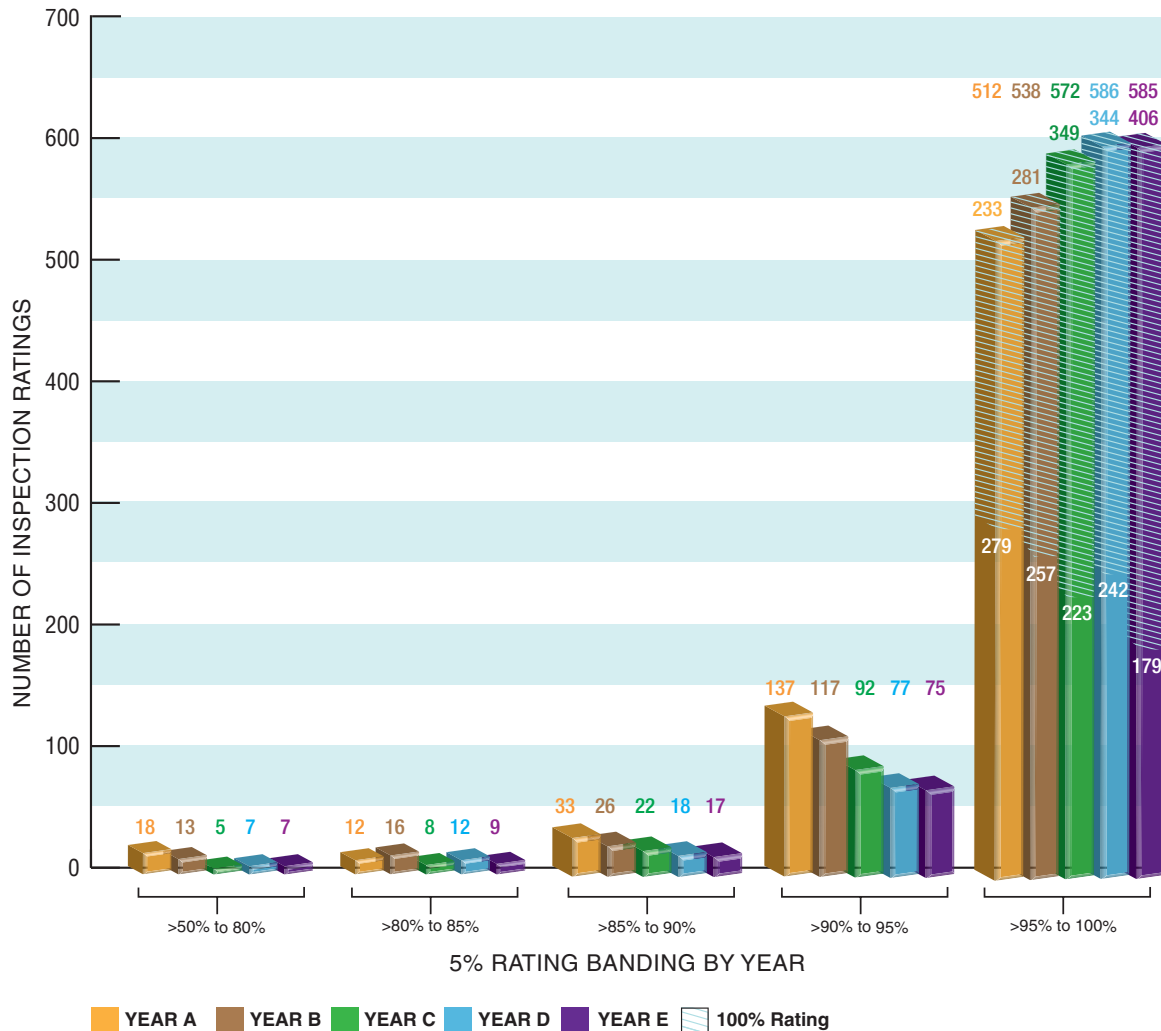
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

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 14 possible modules of the inspection protocol,

which would provide the system owner/operator with information on the areas where they need to improve. The 14 modules are:

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

For further information, please visit www.ontario.ca/drinkingwater

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2025-26)

DWS Name:	ESSEX DRINKING WATER SYSTEM (HARROW-COLCHESTER SOUTH)
DWS Number:	210000130
DWS Owner:	THE CORPORATION OF THE TOWN OF ESSEX
Municipal Location:	ESSEX
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Focused
Compliance Assessment Start Date:	Dec-8-2025
Ministry Office:	Windsor District Office

Maximum Risk Rating: 459

Inspection Module	Non Compliance Risk (X out of Y)
Capacity Assessment	0/30
Certification and Training	0/42
Distribution System	0/4
Logbooks	0/14
Operations Manuals	0/14
Reporting & Corrective Actions	4/29
Source	0/0
Treatment Processes	0/214
Water Quality Monitoring	0/112
Overall - Calculated	4/459

Inspection Risk Rating:	0.87%
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Final Inspection Rating:	99.13%
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Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2025-26)

DWS Name: ESSEX DRINKING WATER SYSTEM (HARROW-COLCHESTER SOUTH)
DWS Number: 210000130
DWS Owner Name: THE CORPORATION OF THE TOWN OF ESSEX
Municipal Location: ESSEX

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Compliance Assessment Start Date: Dec-8-2025
Ministry Office: Windsor District Office

Non-Compliance Question(s)	Non Compliance Risk
Reporting & Corrective Actions	
Were changes to the system registration information provided to the ministry within ten (10) days of the change?	4
Overall - Total	4

Maximum Question Rating: 459

Inspection Risk Rating: 0.87%

FINAL INSPECTION RATING: 99.13%