

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

Windsor Area Office
620 - 4510 Rhodes Dr. Windsor ON N8W 5K5
Tel: 519-948-1464
Fax: 519-948-2396

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

Windsor Area Office
620 - 4510 Rhodes Dr. Windsor ON N8W 5K5
Tél: 519-948-1464
Télécopieur: 519-948-2396



June 27, 2024

Rob Mackie, Manager, Environmental Services
The Corporation of the Town of Essex
33 Talbot Street South
Essex, Ontario, N8M 1A8

**RE: Inspection of Essex Drinking Water System – Essex DS at 120 Sinasac Ave. West,
Harrow, on June 19, 2024 | Planned Event No. 1-355239075**

Attached to this letter is the report for the recent announced inspection completed at the Essex Drinking Water System – Essex DS at 120 Sinasac Ave. West, Harrow, on June 19, 2024, and the corresponding Incident Rating Report (IRR) and Risk Methodology document. This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only.

CORRECTIVE ACTIONS

Instances of non-compliance and/or non-conformance were not identified during the inspection. There are no further actions required on your part and the inspection can be considered closed.

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

If you have questions or concerns, please contact me by email at david.racz@ontario.ca or by telephone at 519-980-2546.

A handwritten signature in black ink that reads "David M. Racz". The signature is written in a cursive, flowing style.

David M. Racz
Water Compliance Officer
Badge No. 1459
Tel: 519-980-2546
Email: david.racz@ontario.ca

Attachments:

Cc: Dr. Mehdi Aloosh, WECHU Medical Officer of Health, maloosh@wechu.org
Kristy McBeth, Director of Health Protection, WECHU, kmcbeth@wechu.org

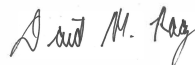
Victoria Peczulis, Manager, Environmental Health, WECHU, vpeczulis@wechu.org
Elaine Bennett, Manager, Environmental Health, WECHU, ebennett@wechu.org
Katie Stammler, Source Water Protection Manager, ERCA, kstammler@erca.org
Mark Smith, Water Compliance Supervisor, MECP London District, Mark.Smith@ontario.ca



ESSEX DRINKING WATER SYSTEM (ESSEX DS)
Physical Address: , , ,

INSPECTION REPORT

Entity: THE CORPORATION OF THE
TOWN OF ESSEX
Inspection Start Date: June 13, 2024
Site Inspection Date: June 19, 2024
Inspection End Date: June 24, 2024
Inspected By: David Racz
Badge #: 1459



(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	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	DWMR1020001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were Form 1 documents prepared as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Form 1 documents were prepared as required. Form 1 documents were missing the Drinking Water Works Permit number.			

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	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.			

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	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.			

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	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.			
The Running Annual Average for the inspection review period was 18.15 ug/mL.			

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.			
The Running Annual Average for the inspection review period was 36 ug/mL.			

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

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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.			

Question ID	DWMR1054001	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: Was an agreement in place that satisfied the requirements prescribed by subsection 5(4) of O. Reg. 170/03?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The agreement in place satisfied the requirements.			

Question ID	DWMR1060001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			

<p>Question: Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?</p>
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence.</p> <p>The Corporation of the Town of Essex has SOPs for hydrant flushing and replacement, dead end flushing, valve maintenance and repair, low pressure situations, sample collection, water service repairs, the blow off flushing and maintenance of watermains, commissioning new watermains, watermain breaks, and opening emergency interconnections. Operators have online and offline access to GIS mapping tools and drawings of the distribution system. The Corporation of the Town of Essex also has a procedure for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint. Collectively, these documents meet the requirements of their Municipal Drinking Water Licence.</p>

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.			
The Corporation of the Town of Essex uses electronic records instead of physical logbooks. Only certified operators conduct testing.			

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.			

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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.			

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

DWS Name: ESSEX DRINKING WATER SYSTEM (ESSEX DS)
DWS Number: 220003680
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: Jun-13-2024
Ministry Office: Windsor Area Office

Maximum Risk Rating: 179

Inspection Module	Non Compliance Risk (X out of Y)
Certification and Training	0/28
Distribution System	0/4
Logbooks	0/14
Operations Manuals	0/14
Reporting & Corrective Actions	0/8
Treatment Processes	0/60
Water Quality Monitoring	0/51
Overall - Calculated	0/179

Inspection Risk Rating: 0.00%

Final Inspection Rating: 100.00%

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

DWS Name:	ESSEX DRINKING WATER SYSTEM (ESSEX DS)
DWS Number:	220003680
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:	Jun-13-2024
Ministry Office:	Windsor Area Office

All legislative requirements were met. No detailed rating scores.

Maximum Question Rating: 179

Inspection Risk Rating:	0.00%
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FINAL INSPECTION RATING:	100.00%
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Application of the risk methodology used for measuring municipal drinking water system inspection results

This document describes the risk rating methodology which has been applied to the findings of the Ministry's municipal residential drinking water system inspection results since fiscal year 2008-09.

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 to account for legislative and societal changes that affect acceptable risk levels. As a result of the most recent review, the methodology has been modified to present an improved metric for the evaluation of the risk/safety of MRDWS operations.

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. The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality

monitoring. Additionally, the inspection protocol contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry have 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 that is less than 100 per cent does not mean that the drinking water from the system is unsafe. It shows areas where a system's operation can improve. To that end, 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 (of the consequence) × 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

Consequence	Consequence Value
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=1 ... 2	R=15 ...	R=6 ...	R=2 ... 1	R=1 ... 6

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 that relate to

regulatory compliance and input their responses as "yes", "no" or "not applicable" 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).

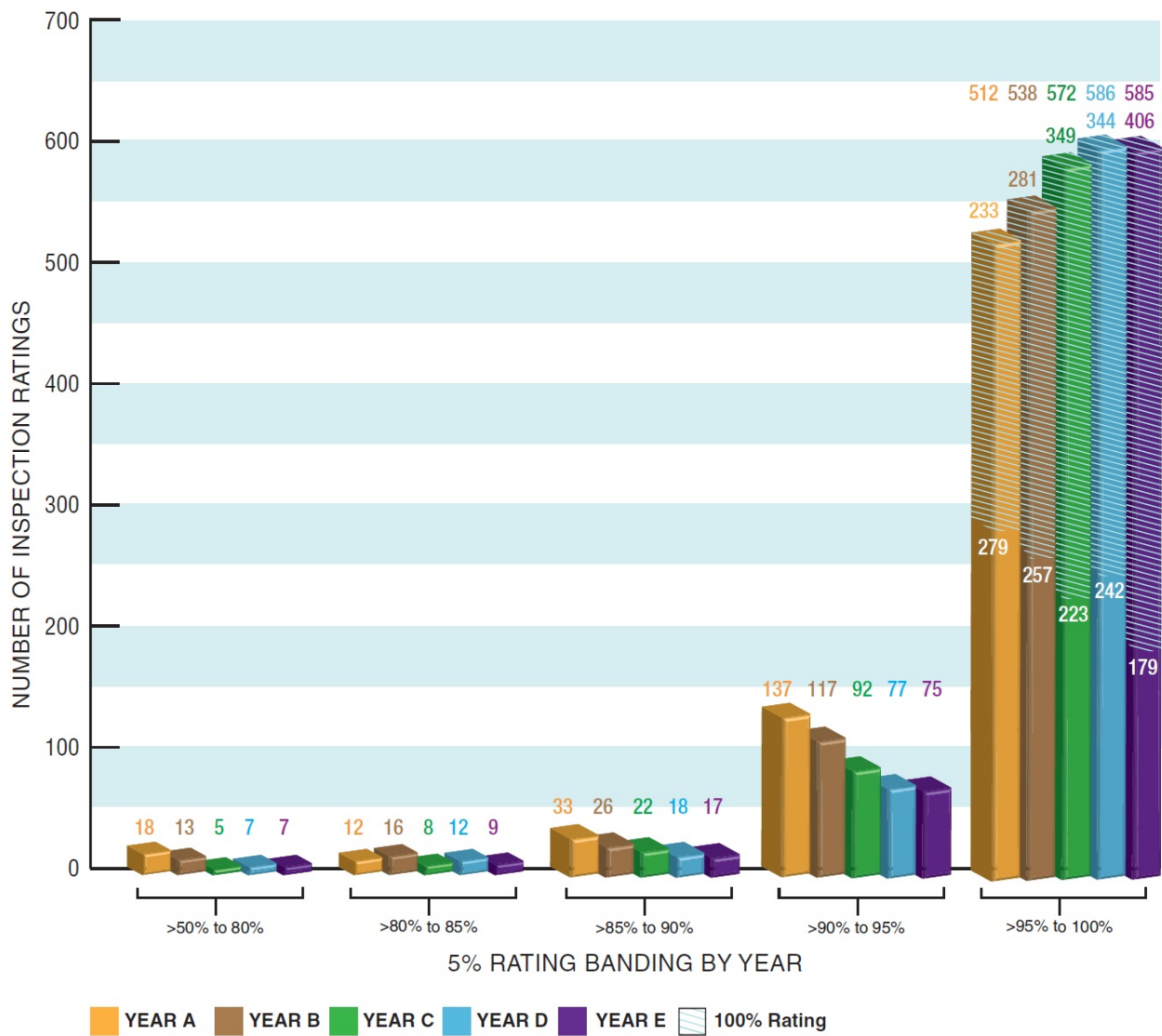
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

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



Year Over Year Distribution of MRDWS Rating

	Year A	Year B	Year C	Year D	Year E
>50% to 80%	18	13	5	7	7
>80% to 85%	12	16	8	12	9
>85% to 90%	33	26	22	18	17

	Year A	Year B	Year C	Year D	Year E
>90% to 95%	137	117	92	77	75
>95% to 100%	233	281	349	344	406

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
2. Permit to Take Water
3. Capacity Assessment
4. Treatment Processes
5. Process Wastewater
6. Distribution System
7. Operations Manuals
8. Logbooks
9. Contingency and Emergency Planning
10. Consumer Relations
11. Certification and Training
12. Water Quality Monitoring

13. Reporting, Notification and Corrective Actions

14. Other Inspection Findings

For further information, please visit Drinking Water Ontario
(<https://www.ontario.ca/drinkingwater>) .

Updated: June 24, 2021
Published: May 19, 2016

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 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/fr/page/eau-potable

Cliquez sur la publication pour y accéder

- [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](#)
- [Marche à suivre pour désinfecter l'eau potable en Ontario](#)
- [Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection](#)
- [Filtration Processes Technical Bulletin \(en anglais seulement\)](#)
- [Ultraviolet Disinfection Technical Bulletin \(en anglais seulement\)](#)
- [Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable](#)
- [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](#)
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- [Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption](#)
- [Liste des personnes-ressources du réseau d'eau potable](#)
- [L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche](#)
- [2020 Watermain Disinfection Procedure \(en anglais seulement\)](#)
- [Laboratoires autorisés](#)